

GUIDELINES FOR THE NEW / ADDITIONAL WORKS PERMITTED UNDER MGNREGA

To strengthen the positive synergy between MGNREGA and agriculture and allied rural livelihoods, to respond to the demands of the States for greater location specific flexibility in permissible works and to help improve the ecological balance in rural India and to provide a cleaner, healthier environment for the rural population, it has been decided to expand the list of permissible works as under.

The MGNREGA Schedule I & II have been amended accordingly.

While implementing these works, the following should be adhered to:

1. All works shall be approved by the Gram Sabha and the Gram Panchayat and shall be part of the Annual Shelf of Projects.
2. The unit costs included in the works below are indicative and project costs for each work will be estimated depending on the Schedule of Rates (SoR's) prevalent in the respective region/area of work.
3. All activities mentioned in items (iv), (x), (xi) and items (xiii) to (xv) of paragraph 1B of Schedule I of the Act, shall be allowed on land or homestead owned by households belonging to the Scheduled Castes and Scheduled Tribes or below poverty line families or the beneficiaries of land reforms or the beneficiaries under the Indira Awas Yojana of the Government of India or that of the small or marginal farmers as defined in the Agriculture Debt Waiver and Debt Relief Scheme, 2008, or the beneficiaries under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007) .
4. For works to be taken up on private land and homestead, the individual land owner shall be a job card holder and also work in the project.
5. It should be ensured that the total material cost (including wages of skilled and semi-skilled workers) of all works in the Annual Shelf of Projects (including the works suggested under Para IC of Schedule I taken up in a Gram Panchayat, in a Financial Year, should not exceed 40 %
6. Only those components of admissible works that lead to creation of durable assets may be taken up under MGNREGA. Items of expenditure that are recurring in nature and/or do not lead to creation of durable assets, are not permitted under MGNREGA.

A. WATERSHED RELATED WORKS

1. CONTOUR TRENCH

In the ridge area of a watershed a contour trench is a simple and inexpensive solution to slowing down surface runoff and reducing soil erosion. A contour trench is a trench dug along a contour line. A contour line is an imaginary line that joins together points of the same elevation. Since the trench is dug along a line that is at the same elevation, this increases the chance of holding the runoff water for a longer time within the trench. If trenches were not to follow a contour, such digging could actually increase the possibility of soil erosion because there would be a rise in the velocity of runoff following upon an increase in the slope of the land.

Contour trenches are constructed in non-arable ridge area i.e. land not suitable for cultivation and with higher land slope (10 to 25%).

Unit cost of a contour trench of dimensions 0.5m*0.5m in staggered design comes to around Rs. 11,000 per hectare. In terms of running length, the cost comes to Rs. 17 per running metre. The unskilled labour cost is 100% of the total cost.

2. CONTOUR BUND

Contour bunds are a simple and low-cost method of checking the velocity of runoff in the ridge area of any watershed. A contour bund is a bund constructed along a contour line. A contour line is an imaginary line which joins together points of the same elevation. Making a bund along a line that is at the same level increases the chances of containing runoff for a longer period of time within the bund. Like contour trenches, bunds also collect the rainwater that falls in the ridge area. This way the soil moisture profile in the area adjacent to the bund is improved. Along with the water, eroded fertile topsoil also gets deposited in the bund. It is, therefore, important to combine contour bunds with appropriate vegetative measures.

Contour bunds are constructed in arable area i.e. land suitable for cultivation and land slope ranging from 3-10% Waste-weirs at suitable location for safe disposal of excess rain water are to be constructed with contour bunds. Therefore construction of waste weir should be part of contour bunds.

For a contour bund of height 0.6m, base width of 2.0m and a cross-sectional area of 0.66 sq.m., the unit cost comes to around Rs. 14,000 per hectare. In terms of running length, the cost comes to about Rs. - 42 per running metre. The unskilled labour: material cost comes to 85:15.

3. BOULDER CHECK

Boulder checks are loose rock dams made on small drainage lines or seasonal streams which have very small catchment area of less than 50 ha. The main aim of constructing loose boulder checks is to reduce the velocity of water flowing through the drainage line. By reducing the velocity of runoff, boulder checks help in reducing soil erosion; trapping silt which slows the rate of siltation in water harvesting structures in the lower reaches of the watershed; creating a hydraulic head locally which enhances infiltration of surface runoff into the groundwater system; and increasing the duration of flow in the drainage line. Therefore, the capacity of the water harvesting structures created downstream on the drainage line is utilised more fully as they get many more refills.

The unit cost of a loose boulder check of 7m length, maximum height of 1m, upstream and downstream slopes 1:1 and 3:1 and top width of 0.5m comes to around Rs. 4000. In the case boulders are available within 200 metres lead, the unskilled labour cost would be 100% of the total cost

4. FARM BUNDING

Farm bunds are constructed on agricultural land with the aim of arresting soil erosion and improving the soil moisture profile. Ideally, bunds on farms should be made on the contour line. However, farmers do not easily accept this as it creates several problems. Contour bunds divide the field into irregular sections. In such a situation, it becomes inconvenient to maneuver bullocks for operations such as ploughing and line-sowing. Due to these difficulties, what is normally practiced in the name of farm bunding is bunding along the field boundaries. However, bunding along the field boundaries should be restricted to only field boundaries falling across the field slope and with waste weir at suitable locations for safe disposal of excess run-off water. Bunds along the slopes are not very useful for arresting soil erosion or conserving moisture. By dividing the field into several units, bunds control the volume and velocity of runoff in each such unit. The water in the field and the soil it is carrying are stopped at each bund. Thus, by not allowing water a long stretch of free flow, bunds break the momentum of water. Bunding improves and stabilises the soil moisture profile.

For a standard farm bund of height 0.6m, base width 1.7m and cross section area of 0.57 sq.m., the unit cost comes to around Rs. 8000 per hectare. In terms of running length, the cost comes to around Rs. 40 per running metre. The unskilled labour: material cost is 85:15. This activity is only for those households eligible under MGNREGA for work on private land.

5. GABION STRUCTURES

Gabion structures are rock and wire dams constructed across drainage lines with a catchment area of 50-500 ha. They are also constructed to reinforce highly erodable stream embankments. The main aim of constructing gabion structures is to reduce the velocity of water flowing through the drainage line. By reducing the velocity of runoff, gabion structures help in reducing soil erosion, trapping silt, which reduces the rate of siltation in water harvesting structures in the lower reaches of the watershed, increasing recharge of groundwater and increasing the duration of flow in the drainage line. Therefore, the capacity of the water harvesting structures created downstream on the drainage line is utilised more fully as they get many more refills.

There are two ways of reinforcing a loose boulder structure with wire mesh: a) to make the structure as per the dimensions of the design and wrap it with wire mesh on all sides except the bottom. This wrap is partially anchored under the bottom; and b) to cage the boulders in rectangular boxes. The structure would be made up of several such boxes tied together. In such a structure the wire mesh not only provides a covering shell, it also gives horizontal and vertical reinforcements within the structure. The second method is superior to the first in terms of strength and it is economical in the use of boulders, although more wire mesh is used than in the first method.

The cost of a gabion structure of 2 m height, 1m top width and 12 m length works out to about Rs. 45000. The unskilled labour:material ratio is 30:70.

6. UNDERGROUND DYKE

Underground dykes are earthen dams that obstruct the flow of this sub-surface water and divert them to nearby wells and tubewells. Dykes do not submerge any land. Nor is the water stopped by them subject to evaporation. Underground dykes are most suited to hard rock areas where impermeable strata are often found at shallow depths below the surface and in areas where the soil required to fill up the dyke is relatively easily available. The main objectives of constructing underground dykes are to impede the flow of sub-surface water and make it available in the watershed for a longer period; to increase the water level in wells by redirecting this sub-surface water to nearby wells and tubewells; and to make surface flows in the drainage line available for a longer period.

The cost of an underground dyke of 12m length, 6m maximum depth and 2m top width works out to around Rs. 43000. The unskilled labour : material ratio is 70:30.

7. EARTHEN DAM

The most important structures of any watershed programme are the earthen dams built on the main stream of the watershed. Most parts of India typically receive rainfall between June and September, very intensely within a few hours and a few days. The number of rainy days does not average more than 40-50. Moreover, rains are extremely erratic, often characterised by late onset and early withdrawal. Prolonged dry spells during the rainy season, resulting in agricultural droughts, are also frequent. Hence, the kharif crop needs to be drought-proofed through 'protective' irrigation, applied to overcome accumulated soil moisture deficits within the rainy season. Earthen dams are especially important in areas which are poor in groundwater resources and which do not have access to canal irrigation. Such areas form about half of India's agricultural area. Earthen dams can also be constructed as percolation structures, to enhance the rate of groundwater recharge. Such percolation structures are usually made on the upper part of the catchment area. Water stored here percolates to wells and tubewells located in the lower part of the catchment. Such percolation dams can also be made in the immediate upstream portion of wells and tubewells.

The cost of an earthen dam of 65 m length, maximum height of 4.65 m, upstream and downstream slopes of 2:1 and 2.5:1 and a top width of 2m works out to around Rs. 2.6 lakhs. In general the unit cost works out to Rs. 20-30 per cum. of water stored. The unskilled labour : material ratio is 95:5.

This is an activity that can be undertaken on public land only.

8. DUGOUT FARM PONDS

Dugout farm ponds (DOP) are made on private land to harvest runoff from very small local catchments. The main reason for making a DOP is to collect rainwater, which would otherwise have flowed out of the field. There are several days in succession in the monsoon when there is no rainfall. Such prolonged dry spells may actually ruin the kharif crop. The DOP protects against such crop failure. Unlike the earthen dams, DOP is relatively free of topographical constraints. On flatter land in the village, streams are not very deep, nor do they have high embankments. Thus it becomes difficult to build water harvesting structures like earthen dams. In such flat lands, DOPs are the most effective water harvesting solution. The main objective of such structures is to provide protective irrigation to the kharif crop. In addition, in West

Bengal, Assam, Chhattisgarh, Bihar, Jharkhand and Orissa, DOPs have been traditionally used to irrigate the rabi crop and also for fish farming.

The cost of a DOP of 25m*20m*2m dimensions (1000 cubic metre storage capacity) works out to around Rs. 1,00,000. In general the unit cost works out to Rs. 50-60 per cum. of water stored. The unskilled labour cost is 100% of the total cost.

This activity is only for those households eligible under MGNREGA for work on private land.

9. STOP DAM

Stop dams are constructed on streams with big catchments. They are designed to capture the post monsoon flows. Usually, the gates of the stop dam are kept open during the monsoon season to let out runoff water. This also ensures that there is little or no siltation in the stop dam. After the monsoon, the gates are closed and the dam gets filled up with post monsoon flows. Hence, such dams should be constructed only in streams with perennial flows so that the stop dam gets several re-fills during the post-monsoon season.

For a stop dam with a catchment area of 1000 hectares, length of 20m, maximum height of 2.7m, top width of 1.5m and side slopes of 1:1, the cost works out to around Rs. 5 lakhs. In general the unit cost works out to Rs. 90-100 per cum. of water stored. Stop dams are masonry dams either using bricks or stone. Where hard stones (compact basalt or granite) are available in sufficient quantity, it is good to use random rubble stone masonry. Also used are pre-fabricated metal sheets of 1.5 mm thickness for the gates of stop dams. The unskilled labour : material ratio works out to 25:75.

Full technical details of all structures in this section are available in manuals of the Ministry of Rural Development, Government of India. These can be accessed at <http://www.nrega.nic.in>

B. WATERSHED RELATED WORKS IN MOUNTAIN REGIONS

10. SPRINGSHED DEVELOPMENT

Regenerating springs' discharge in mountain regions is critical because they are the sources of most rural and urban water supply systems. Larger springs are also used for irrigation. A springshed is the area of a mountain slope that feeds water to a spring through underground seepages. Springshed (sometimes also referred to as spring sanctuaries) development can help enhance rainfall infiltration into the ground, recharge springs, revive dysfunctional traditional water harvesting systems, moderate flood peaks and recharge streams and rivers. Springshed development includes a number of interventions that are typical of watershed development, e.g., trenching, planting of trees, fodder grasses or hedges and gully plugging. The typical size of a springshed ranges from as little as a couple of hectares to about 20 ± 5 hectares.

The unit cost of springshed development depends on the location, slope, and the types and number of interventions. It is estimated that the costs can range from about Rs. 18,000 to Rs. 38,000 per hectare depending on the combination of proposed interventions. The labour to material ratio can vary from 90:10 upto 60:40. For example, a combination of staggered trenches and fuel/fodder tree plantation on <30% slope costs about Rs.22,000 per hectare with a labour: material ratio of 70:30. Staggered trenches on

terraced fields with fruit trees plantations may cost about Rs. 38,000 with a unskilled labour: material ratio of 90:10.

Details of a springshed development programme can be seen at www.sikkim springs.org.

C. AGRICULTURE RELATED WORKS

11. NADEP COMPOSTING

Revitalizing soil health holds the key to improving productivity of Indian agriculture. **Composting** is a process of utilising and processing solid waste through which its organic component is biologically decomposed to a humus-like state that can be used as fertiliser. Solid wastes usually contain the entire range of micro-organisms in large numbers. Under appropriate conditions, the microbial population grows and in doing so, degrades the organic portion of the waste.

NADEP composting involves the construction of a 3.6m*1.5m*0.9m compost trough, which can produce 1 tonne of composted manure in each cycle. This manure is sufficient to cover 0.25 hectare of agricultural land. The NADEP pit is usually constructed with a lattice brick wall to ensure proper aeration. Inside this trough a series of layers of agricultural waste, dung and soil are successively heaped upon each other. About 100-110 kg of agricultural waste is first placed on the ground in a layer which is about 6 inches high. 4 kg of dung mixed in 125-150 litres of water is applied on top of this layer (the quantity of water used varies with the seasonal temperature, more water being necessary in the summer months). On top of the second layer, cleaned and sifted soil (roughly half the weight of the agricultural waste used, i.e. 50-55 kg) free of stones, glass etc. is spread on which a little water is also sprinkled. In this manner successive layers are heaped to a height of about 1.5 ft. above the top of the trough. After this the top of the pile is sealed with a 3 inch plastering of soil mixed with dung (400-500 kg). Within 2-3 months dark brown, friable, soft and moist compost, free of all foul odours is ready. It has been generally estimated that by the NADEP method, one head of cattle produces 80 tonnes of manure in a year. The nutrient status of this manure is Nitrogen 0.5-1.5%, Phosphorous 0.5-0.9% and Potassium 1.2-1.4%.

The unit cost of a NADEP pit of 3.6m*1.5m*0.9m is estimated at around Rs. 8000. The unskilled labour : material ratio of this work is 25:75.

Selection of households to be taken up for this activity under MGNREGA will be made only from those households eligible under MGNREGA for work on private land. Before taking up a second NADEP pit for any household under MGNREGA, it must be first ensured that all eligible MGNREGA households willing to take up this work have been covered with one NADEP pit.

12. VERMI-COMPOSTING

Vermi-composting uses earthworms to turn organic wastes into very high quality compost. In ideal conditions worms can produce at least their own weight of organic matter in a day. The micro-organisms in the worm casts promote healthy plant growth. Usually, a twin pit model is used for vermi-composting, with the pit size of 3.6m*1m*0.75m and with a dividing wall in the middle. Vermi-composts are best suited for intensive application in kitchen gardens and small vegetable plots. One vermi-compost pit produces 0.15 tonne of compost, which is sufficient for enhancing productivity of 0.25 hectare (2500 sq.m.).

The unit cost of one vermi-compost pit comes to around Rs. 9000, with a labour : material ratio of 25:75.

Selection of households to be taken up for this activity under MGNREGA will be made only from those households eligible under MGNREGA for work on private land. Before taking up a second vermi-compost pit for any household under MGNREGA, it must be first ensured that all eligible MGNREGA households willing to take up this work have been covered with one vermi-compost pit.

13. LIQUID BIO-MANURES: SANJEEVAK OR AMRIT PAANI

Sanjeevak is a liquid manure application based on cattle-urine. This low cost and effective method has immense potential to improve plant nutrition. In a brick masonry pit of 1m*1m*1m, 50 kg of cow dung, 20 litres of cattle urine, 1 kg jaggery and 1 kg of chickpea flour is mixed with 1000 litres of water. This solution is fermented for 5 to 7 days. This solution should be shaken regularly three times a day. After 7 days, the liquid manure of 1000 litres is diluted and applied on the field. This liquid manure can be mixed with irrigation water (fertigation) at the time when crops are irrigated. This ensures an even spread of the manure in the field. It can also be used in vegetable plots and kitchen gardens. The pit can be filled again and within the next 15 days another round of Sanjeevak can be applied to the crop.

The unit cost of one Sanjeevak pit is around Rs. 2000. The unskilled labour : material ratio is 30:70. This activity is only for those households eligible under MGNREGA for work on private land. A maximum of 3 Sanjeevak pits will be constructed per selected household under MGNREGA.

D. LIVESTOCK RELATED WORKS

To improve the participation of the poor and disadvantaged sections in the fastest growing segment of India's agrarian economy, viz., the livestock sector, we propose to permit the following works under MGNREGA:

14. POULTRY SHELTER

Backyard poultry helps in supplementing income as well as for providing much needed nutritional inputs for rural households. Poultry birds suffer from very poor shelter infrastructure available in villages leading to their poor health and frequent illnesses. High mortality amongst birds results in high losses and unpredictable and low incomes. To protect the birds from predators and frequent illnesses a pucca structure is required to act both as a night shelter and to provide protection to birds and eggs from predators.

A shelter of 7.50 sq m. (length 3.75 m and width 2 m) would be suitable for 100 birds. On the longer sides, the shelter will have a 30 cm high and 20 cm thick brick masonry wall upto plinth level. From the plinth to the top of the shelter there is a wire mesh supported by brick masonry pillars of size 30 cmx30 cm. The shorter side will have a 20 cm thick brick masonry wall with an average height of 2.20 metres. The roof will be supported by a steel truss. The roof will have galvanised iron corrugated sheets. The base of the floor will be constructed by hard moorum filling. The floor will be built by using 2nd grade bricks with packing in 1:6 ratio of cement mortar.

The total cost of such a poultry shelter is around Rs. 40,000. The poultry shelter will have a unskilled labour : material cost ratio of 20:80.

The hope is that gradually this would enable these households to move away from MGNREGA and make a living from poultry. Selection will be made only from those households eligible under MGNREGA for work on private land. Priority should be accorded to landless households.

15. GOAT SHELTER

Most poor rural households, who depend on small ruminants, lack the resources to construct and provide for an adequate and safe living space for their cattle. It is well known that for tribals of Central India goats and poultry are often more important as a means of livelihood than even minor forest produce. Lack of a safe living space leads to their poor health, frequent illnesses and to their maintaining a very low and uneconomical herd size. In the integrated farming systems of tribal households, the “waste” from livestock systems, such as cow dung, goat litter and urine are important organic inputs into agricultural farms, increasing soil fertility and raising crop output. Poor shelter infrastructure leads to low and inefficient collection of dung and urine, which is a waste of valuable and locally available organic inputs to farming. Thus, provision of better shelter facilities for cattle offers a win-win situation by which animal health and soil health can be improved simultaneously, with very low initial investments. It is one of the most suitable and accepted means of livelihood for the landless.

A 7.5 sq m. shelter (length 3.75 m and width 2 m) would be suitable for 10 animals. The 4 walls will be raised to an average height of 2.20 metres. The walls will be of brick masonry using 1:4 cement mortar. The roof will be supported by a steel truss. The roof will have galvanised iron corrugated sheets. The floor will be of hard moorum.

The cost of such a goat shelter will be around Rs. 35,000. The goat shelter will have a unskilled labour:material ratio of 25:75.

The hope is that gradually this would enable these households to move away from MGNREGA and make a living from poultry. Selection will be made only from those households eligible under MGNREGA for work on private land. Priority should be accorded to landless households.

16. CONSTRUCTION OF PUCCA FLOOR, URINE TANK AND FODDER TROUGH FOR CATTLE

Usually, cattle are kept in sheds with kutchra floor. The place where cattle rest often gets messy with cow dung, cattle urine and water. In particular, during rainy seasons the kutchra floor becomes unhealthy for and causes several infectious diseases for the cattle. Also, cattle urine and cow dung are important resources that could enhance soil fertility. If the floor of the cattle shed is constructed as pucca floors with cement and stones, this would enable better collection of dung and cattle urine as well as protect cattle from infections. A tank constructed for urine collection could be used to make liquid manure to enhance soil fertility. A fodder trough would facilitate proper feeding of cattle and minimise waste of fodder.

The area of the cattle shed floor for 6 heads of cattle is 26.95 sq.m. (7.7mx3.5m). For constructing the cattle shed floor in cement concrete, a 1 cum fodder trough (7.7mx0.2mx0.65m) and a cattle urine

collection tank of 250 litres, the cost works out to around Rs. 35,000 per unit. The unskilled labour:material ratio is 30:70.

Selection will be made only from those households eligible under MGNREGA for work on private land.

17. AZOLLA AS CATTLE-FEED SUPPLEMENT

Azolla is an easy to use nutritional supplement for cattle. It is rich in proteins, essential amino acids, vitamins (vitamin A, vitamin B12 and Beta-Carotene), growth promoter intermediaries and minerals like calcium, phosphorous, potassium, iron, copper, magnesium. On a dry weight basis, it contains 25-35 percent protein, 10-15 percent minerals and 7-10 percent of amino acids, bio-active substances and bio-polymers. Livestock can easily digest it, owing to its high protein and low lignin content. Azolla can be mixed with concentrates or can be given directly to livestock. Azolla can also be fed to poultry, sheep, goats, pigs and rabbits.

Azolla can be grown in artificial water bodies made preferably under shade. A pit of the size of 2m x 2m x 0.2 m is dug as a first step. The bottom of the pit is covered with plastic gunnies. About 10–15 kg of sieved fertile soil is uniformly spread over this plastic sheet. Slurry (made of 2 kg cow dung and 30 gm of super phosphate in 10 litres of water) is poured on to this sheet. More water is poured to make the water level reach about 10 cm. About 500 gm-1 kg of fresh and pure culture of Azolla is introduced in the pit. Azolla will rapidly grow and fill the pit within 10 – 15 days. About 500 – 600 gm of Azolla can be harvested daily thereafter.

The cost of one Azolla pit is around Rs.2000. The unskilled labour : material ratio is 15:85. This activity is only for those households eligible under MGNREGA for work on private land.

E. FISHERIES RELATED WORKS

18. FISHERIES IN SEASONAL WATER BODIES ON PUBLIC LAND

Fisheries as a livelihood activity for the poor have immense scope. Many small reservoirs, tanks, water harvesting ponds created under MGNREGA are ideally suited for fish production. In the floodplains of Bihar, Uttar Pradesh and West Bengal, there are a large number of small water bodies with potential for fisheries development. These water bodies are mainly fed by surface run-off from local catchments. Varying water spread area, pronounced seasonality of filling, high dependence on rainfall and competitive claims on stored water for irrigation are some of the characteristics of these water bodies.

There is a large gap in the potential and actual yields in these rainfed water bodies. There is scope for enhancing the fish production by 3 to 5 times from the current productivity levels. Adopting culture based fisheries with advanced fingerlings (100 mm and above) at stocking rates of 500-1000 fingerlings per ha can substantially increase productivity in the water spread area in small reservoirs, estimated at 1.2 million ha in the country.

The activities involved include digging and landscaping of the bed of the water body to suit fish production, ensuring year round dead-storage, protecting the spill-ways and provision of small fish nursery ponds with assured water for rearing fingerlings. A 500cu.m. fish nursery pond and excavation of 15,000

cu.m. in an existing tank bed, along with a fish drying platform of 30 sq.m., will cost around Rs. 11 lakhs. The approximate unit cost of this activity is Rs. 75 per cubic metre of excavation and the unskilled labour:material ratio works out to 80:20.

The common pool nature of these water bodies makes fish production in them a complex task. This will need to be tackled through appropriate arrangements at the local level, which may require facilitation, especially in the initial stages.

F. WORKS IN COASTAL AREAS

19. FISH DRYING YARDS

Fish drying yards in coastal areas are concrete surfaces constructed in connection with fish landing centres and fishery harbours for hygienic drying of fish in a traditional way. For this purpose, a yard is constructed on the seashore of 10m x 10m size with 15 cm thick plain cement concrete and brick protection work of 20cm thickness. This yard is covered by a net for protection of fish.

The unit cost of such a fishing yard is about Rs. 75,000. The unskilled labour:material ratio is 15:85.

20. BELT VEGETATION

Vegetation cover such as mangrove, casuarina and palm plantation has the potential to address sea erosion. The cost per unit is about Rs.20. The unskilled labour:material ratio is 80:20.

21. CONSTRUCTION OF STORM WATER DRAINS FOR COASTAL PROTECTION

Constructing a channel parallel to the road and other connecting channels to the main channel at 100m interval at required slope can make a big contribution to coastal protection. The channels are constructed by random rubble masonry. The width of the channel is 0.60 m. Size of rubble work is 0.60cmx0.60cm. The depth of the channel is 0.60cm.

The unit cost of such a 100m long storm water drain is about Rs.2,30,000. The unskilled labour:material ratio is 15:85.

G. RURAL DRINKING WATER RELATED WORKS

22. SOAK PITS

Soak Pit is an underground structure that allows water to soak into the ground. This helps in improving sustainability of the source of water.

The unit cost of this activity is around Rs.2000. The unskilled labour: material ratio is 50:50.

This activity may be taken up under MGNREGA only if the soak pit has not been constructed under NRDWP. All NRDWP specifications will be strictly followed.

This is an activity that can be undertaken both on public land and private land. In the latter case, this activity is only for those households eligible under MGNREGA for work on private land.

23. RECHARGE PITS (FOR POINT RECHARGE)

A Recharge Pit allows rainwater to replenish groundwater. It can be built to recharge a borewell or just to help the water infiltration in an area. This helps in improving sustainability of the source of water.

The unit cost of this activity is around Rs.5000. The unskilled labour: material ratio is 50:50.

This activity may be taken up under MGNREGA only if the recharge pit has not been constructed under NRDWP. All NRDWP specifications will be strictly followed.

This is an activity that can be undertaken both on public land and private land. In the latter case, this activity is only for those households eligible under MGNREGA for work on private land.

Full technical details of the works in this section are available with the Ministry of Drinking Water Supply and Sanitation, Government of India

H. RURAL SANITATION RELATED WORKS

24. INDIVIDUAL HOUSEHOLD LATRINES (IHHL)

The unit cost of this work is Rs.9900. Under the Total Sanitation Campaign (TSC), the Government contribution is Rs.4500 and the beneficiary contribution is Rs. 900.

A total of upto 20 persondays of unskilled labour and 6 persondays of skilled labour may be taken up under MGNREGA. However, the contribution from MGNREGA would not exceed Rs. 4,500 per beneficiary. The unskilled labour:material ratio of the MGNREGA contribution will be 60:40. The MGNREGA material component will be used only for the skilled labour component of the total cost of IHHL.

Skilled labour and mate provided will be under the material cost and should not exceed 40% of the total cost under MGNREGA

Selection will be made only from those households, which are eligible under MGNREGA for work on private land and who have not yet been covered for IHHLs under the Total Sanitation Campaign (TSC).

All TSC specifications will be strictly followed. Creating awareness for this work is a key to success. The IEC may be done through the resources available with the Ministry of Drinking Water Supply and Sanitation and corresponding State departments.

Detailed Guidelines for this work are Annexed.

25. SCHOOL TOILET UNITS

The unit cost of this activity is Rs.35,000. The unskilled labour:material ratio is 10:90.

This activity may be taken up under MGNREGA only if the school toilet unit has not yet been constructed under TSC. All TSC specifications will be strictly followed.

Creating awareness for this work is a key to success. The IEC may be done through the resources available with the Ministry of Drinking Water Supply and Sanitation and corresponding State departments.

26. ANGANWADI TOILETS

The unit cost of this activity is Rs.8,000. The unskilled labour:material ratio is 17:83.

This activity may be taken up under MGNREGA only if the anganwadi toilet unit has not yet been constructed under TSC. All TSC specifications will be strictly followed.

Creating awareness for this work is a key to success. The IEC may be done through the resources available with the Ministry of Drinking Water Supply and Sanitation and corresponding State departments.

27. SOLID AND LIQUID WASTE MANAGEMENT (SLWM)

Effective solid and liquid waste management leads to multiple benefits:

Health benefits from safe disposal of waste that would otherwise contaminate the environment.

Economic benefits through re-use/recycling of products that would have been discarded as waste.

Aesthetic benefits from a clean environment without unsightly mounds of rotten waste dumped in the open.

Effective management of SLWM includes management of biodegradable and non biodegradable waste, management of all grey water generated in the village and general cleanliness of the village. The activities under SLWM include:

I. Solid Waste Management

- (i) Construction of Compost pits/common compost pits,
- (ii) System for collection, transportation, segregation and composting and disposal of household garbage.

II. Liquid Waste Management

- (i) Construction of low cost drainage,
- (ii) Construction of soakage channels/ pits, reuse of waste water,
- (iii) Construction of stabilization ponds.

A typical SLWM project for a population of 1000 people comes to around Rs.5 lakhs. The unskilled labour:material cost ratio is 35:65. Under MGNREGA, **only proposed or completed Nirmal Grams will be eligible for this activity**. All TSC specifications will be strictly followed.

Creating awareness for this challenging work is the key to success. This IEC may be done through the resources available with the Ministry of Drinking Water Supply and Sanitation and corresponding State departments.

Full technical details of the works in this section are available with the Ministry of Drinking Water Supply and Sanitation, Government of India

I. FLOOD MANAGEMENT RELATED WORKS

28. DEEPENING AND REPAIR OF FLOOD CHANNELS

A major shift in the 12th Plan strategy of flood management is the renewed focus on reviving local drainages. In many flood-prone villages, drainages are in a state of disrepair or have become silted up or have been encroached upon. These channels play a crucial role in directing flood waters out of the village. Both field channels (connecting farms to the main channel) and the main channel(s) of the village need to be repaired and deepened.

The unit cost of deepening the main channels is around Rs.180 per metre. The unskilled labour: material ratio is 100:0

The unit cost of deepening the field channels is around Rs.30 per metre. The unskilled labour:material ratio is 100:0

29. CHAUR RENOVATION

Waterlogged lowlands, known as chaur in Bihar, are the natural, saucer-shaped, topographically low-lying areas where rainwater accumulates. They can play a major role in flood mitigation because they act as natural “sponges” for flood waters. The surface area of a chaur can be very large, covering portions of several villages. Renovated chaur could be used as multi-purpose farm ponds. The mud excavated from the chaur can be raised on the side as embankments on which crops like banana, papaya, mango, pigeon pea and cashew nut can be grown. The pond water can be used to irrigate the non-waterlogged, upland area. Experiments have shown that in waterlogged areas, cultivation of water chestnut (*Trapa bispinosa*) can be quite profitable.

The unit cost of chaur renovation is around Rs. 4.7 lakhs per hectare. The unskilled labour:material ratio is 100:0

J. IRRIGATION COMMAND RELATED WORKS

30. REHABILITATION OF MINORS, SUB-MINORS AND FIELD CHANNELS

Surface irrigation systems have made a major contribution towards promoting food security and reduction of poverty in India. However, a major challenge facing surface irrigation systems is the growing gap between irrigation capacity created and irrigation capacity utilised. The major reason for this growing gap is the neglect of command area development, especially field channels.

The works permissible under MGNREGA will entail **one-time** rehabilitation of minors, sub-minors and field channels, including desilting, repair of minor cracks, earth leveling, repair of earthen embankments, bank raising and resurfacing canal base with clay. Regular O&M will **not** be a permissible activity under MGNREGA.

The unit cost of this activity is Rs.3000 per hectare. The labour: material ratio is 60:40


(D.K. Jain)

Joint Secretary (MGNREGA)