and short tem arrangements for housing, food, fuel, transport etc., lay a substantial burden on the construction costs. Further, lining of channels is not the only effective method of controlling waterlogging as the supporters of tubewells assert that water logging can be better checked by pumping up the seepage water. Some engineers prefer seepage drains as a remedy for water-logging. There may be another reason to oppose lining: prevention of seepage losses would essentially require remodelling of the channel.

The cost analysis for a perfectly impervious lining and its comparison with the saving in irrigation water, crop incomes and long term benefits, show that an outlay of Rs. 20 per hundred sq.ft. of lining would be reasonable. The cost of cement cum sand plaster lining comes out to be Rs. 19.80 per hundred sq.ft. of plaster and it will be even less for established berms or by the treatment of cement and sand with patent material. This type of lining would require a mechanical mixer for a large scale project. The cost of materials for a 6 inches thick concrete lining is Rs. 12.5 per hundred square feet. This compares unfavourably with the rate for cement and sand plaster, but keeping in view the reduction in extra charges, the overall cost would be about the same. Slab lining has an advantage of rapidity of manufacture, cheapness combined with efficacy, but it requires specially designed watertight joints to be fully impervious. The cost of slab lining when employed on large scale is estimated to be Rs. 20 per hundred square feet. One of the cheapest lining material is clay puddle costing Rs. 17.80 per hundred square feet. The execution of this type of lining is slow and needs careful supervision to ensure a uniform quality waterproof material. It can not be applied in areas where haulage of the right kind of clay is expensive. The cost analysis of various types of lining has been based on channel water depths varying from 8 to 10 feet.

Lining for canals is quite expensive if they are to be kept 100 percent watertight. Depending upon site conditions a suitable lining can be selected keeping in view financial aspect of the project. If a lining is to be laid below spring level, composite linings are ruled out, while a clay puddle lining is also objectionable. The only likely choice would be slab lining and it would be profitable for a channel whose controlling water depth is atleast ten feet. If a lining is to be laid above spring level, clay puddle lining would appear to be the most feasible provided that