

Polavaram or Indirasagar Project, Andhra Pradesh
Calculation of Benefit Cost Ratio (BCR) for Irrigation Components

Cost of Pushkar LIS		379.5	Crore	
Cost of Tadipudi LIS		376.96	Crore	
Cost of Tubewells		199.5	Crore	
Apportionment of the project cost			Crore	
Polavaram Irrigation component cost		9307.54	Crore	
		1026350	lakh	
				CCA = 2.91 lakh ha
Cost of land leveling and other miscellaneous on farm land development work @ Rs.18000 per ha		52380	lakh	
Sum		1078730		
	Before Irrigation / Pre Project		After Irrigation / Post Project	
A. Gross Receipts				
1. Gross value of farm produce		64053.92		457535.52
2. Dung receipts (at 30% of fodder expenditure)		2882.43		13726.06
3. Total (A) Gross receipts (1 & 2)		66936.35		471261.58
B. Expenses				
1. Expenditure on seeds		5062.04		13899.59
2. Expenditure on manure & pesticides		12180.40		32013.09
3. Expenditure on hire labour (human & Bullock)		12810.80		91507.10
4. Fodder expenses	15% of A1	9608.09	10% of A1	46753.55
5. Depreciation on implements	2.7% of A1	1729.48	2.7% of A	12353.47
6. Share and Cash rent	5% of A1	3202.68	3% of A1	13726.06
7. Land Revenue	2% of A1	1281.09	2% of A1	9150.72
Total B Expenses (1 to 7)		45874.58		218403.58
C. Net value of Produce				
1. Total Gross receipts		66936.35		471261.58
2. Minus total expenses		45874.58		218403.58
3. Net value of produce		21061.77		252858.00
D. Annual Agricultural Benefits				
1. Net value after Irrigation			252858.00	
2. Net value before Irrigation			21061.77	
3. Net annual Benefits			231796.23	
Other Benefits				
deduct for submergence				
Net Annual Benefits			231796.23	
G. Annual Cost				
1. Interest on capital @10% (estimated total cost of the project including cost of land development)			107873.00	
2. Depreciation of the project @1% of cost of project for 100 years life and @2% of cost of project for 50 years life of project			10263.50	
3. Annual Operation & Maintenance charges @ Rs 1175 / ha of CCA or ICA			5123.00	

4.Maintenance of Headworks @ 1% of it's cost		9135.79
5.Depriciation of the pumping system @8.33% of the estimated cost of the pumping system assuming life of the system as 12 years(for lift irrigation		285.86
6.Depriciation of the raising main @ 3.33% of the estimated cost of the raising main assuming life of the system as 30 years(for lift irrigation schemes		74.86
7.Annual Power charges for lift irigation		3207.70
8. Total (G) Annual Cost (1 to 7)		135963.71
Benefit Cost Ratio : Annual Benefit / Annual Cost		1.70

141st TAC, dtd: 11-02-2019

ANNEX-II

ANNEXURE - I

CALCULATION OF BC RATIO RCE 2017-18 FOR POLAVARAM IRRIGATION PROJECT

Cost of Head works	39004.86 Crores	
Cost of Head works EXCLUDING Land acquisition and R & E	9734.34 Crores	
Cost of Consumptive use Tube wells	421.86 Crores	
Apportionment of Project Cost as per the Abstract given by Cost Appraisal Directorate		
Cost of Irrigation Component	43773.29 Crores	
Cost of Water supply	7214.67 Crores	
	Rs in Crores	Rs in Lakhs
Estimated cost of project in Crores in Lakhs (cost of irrigation component of Polavaram + cost of tube wells)+Cost of water supply	51409.82	5140982.00
Cost of Land Development at Rs. 20,000/ha of 291114 ha (CCA)		58222.80
Total		5199204.80

Sl.No	Description of Item	Before Irrigation	After Irrigation
1	Gross value of Farm produce	98440.57	1021343.01
2	Dung receipts	4429.83	30640.29
3	Total (A):Gross receipts	102870.40	1051983.30
B	EXPENSES		
1	Expenditure on seeds	7088.28	35462.48
2	Expenditure on Manure + pesticides etc	30872.46	106267.97
3	Expenditure on Hired Labour (Human and Bullock)	19688.11	153201.45
4	Fodder Expenses (As percentage of gross value produce)(at 15% pre project and 10% post project)	14766.09	102134.30
5	Depreciation on Implements (at 2.7%)	2657.90	27576.26
6	Share and Cash Rent (at 5% pre project and 3% post project)	4922.03	30640.29
7	Land Revenue (at 2%)	1968.81	20426.86
8	Total (B):Expenses (1 to 7)	81963.68	475709.62
C	Net Value of Produce		
1	Total Gross Receipts (Total A.3)	102870.40	1051983.30
2	Minus Total Expenses (Total B 8)	81963.68	475709.62
3	Net Value of Produce (1-2)	20906.72	576273.68
D	ANNUAL AGRICULTURAL BENEFITS (POLAVARAM COMMAND)		
1	Net value after Irrigation	576273.68	
2	Minus Net Value before Irrigation	20906.72	
3	Net Annual Benefits	555366.96	

E	Revenue from industrial and domestic water supply as per Municipal corporation Visakhapatnam the rate for supply of industrial water is Rs. 60/kl and drinking water bulk supply is Rs 20 per KL. After deducting 50% of cost towards conveyance charges the net rates are taken as Rs 30 per KL for industrial water and Rs. 10/kl for domestic water supply.	171138.17
F	Annual benefits from Krishna delta by using Polavaram Irrigation Project irrigation benefits to a tune of 555367 lakhs for 164.9 TMC. Hence for 80TMC of water the benefits will be $= 80/164.9 * 555367 = 269432$ Lakhs. As the cost of the Distributory network is not considered, 30% of the above benefit only is considered towards the benefit for diversion of 80TMC through Polavaram Project and its Right Main Canal	80829.64
G	Annual benefits from Fisheries	147031.00
E	TOTAL NET ANNUAL BENEFITS (D3+E+F)	954365.76
G	ANNUAL COSTS:	
1	Interest on Capital @ 10% (Estimated total cost of the Project including cost of land development @Rs.20000/ha)	519920.48
2	Depreciation of the project @ 1% of the cost of the project for 100 years life of the project over irrigation component	51409.82
3	Annual operation and maintenance charges @Rs 1175 per Ha of CCA for 4.36825 Lakh ha	5132.69
4	Maintenance of Head Works @1% of its cost	9734.34
	Total	586197.33
	BENEFIT COST RATIO = ANNUAL BENEFITS / ANNUAL COST	1.63

Physical Status of Land Acquisition (LA) and Resettlement & Rehabilitation (R&R)
(Up to + 45.72 m)

S. No.	Component	Required	Acquired	Balance
1	LA in Acre			
a	Submergence, Headworks & Canals	130894.7	98008.93	32885.77
b	LA for R&R Colonies	9139.62	3518.23	5621.39
c	Land to Land	27304.81	9657.67	17647.14
	Sub Total	167339.13	111184.83	56154.30
2	R & R (PDFs)			
a	R&R Housing, Infra and Entitlements	105601	3110	102491

रजिस्ट्री सं० डी० एल—(एन)04/0007/2003—14

REGISTERED NO. DL—(N)04/0007/2003—14



भारत का राजपत्र The Gazette of India

असाधारण

EXTRAORDINARY

भाग II — खण्ड 1

PART II — Section 1

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

सं० 6] नई दिल्ली, शनिवार, मार्च 1, 2014/ फाल्गुन 10, 1935 (शक)
No. 6] NEW DELHI, SATURDAY, MARCH 1, 2014/PHALGUNA 10, 1935 (SAKA)

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके।
Separate paging is given to this Part in order that it may be filed as a separate compilation.

MINISTRY OF LAW AND JUSTICE

(Legislative Department)

New Delhi, the 1st March, 2014/Phalguna 10, 1935 (Saka)

The following Act of Parliament received the assent of the President on the 1st March, 2014, and is hereby published for general information:—

THE ANDHRA PRADESH REORGANISATION ACT, 2014

No. 6 of 2014

[1st March, 2014.]

An Act to provide for the reorganisation of the existing State of Andhra Pradesh and for matters connected therewith.

BE it enacted by Parliament in the Sixty-fifth Year of the Republic of India as follows:—

PART I

PRELIMINARY

1. This Act may be called the Andhra Pradesh Reorganisation Act, 2014.

Short title.

2. In this Act, unless the context otherwise requires,—

Definitions.

(a) “appointed day” means the day which the Central Government may, by notification in the Official Gazette, appoint;

(b) “article” means an article of the Constitution;

(c) “assembly constituency”, “council constituency” and “parliamentary constituency” have the same meanings as in the Representation of the People Act, 1950;

Jurisdiction of Board.

87. (1) The Board shall ordinarily exercise jurisdiction on Godavari and Krishna rivers in regard to any of the projects over headworks (barrages, dams, reservoirs, regulating structures), part of canal network and transmission lines necessary to deliver water or power to the States concerned, as may be notified by the Central Government, having regard to the awards, if any, made by the Tribunals constituted under the Inter-State River Water Disputes Act, 1956.

33 of 1956.

(2) If any question arises as to whether the Board has jurisdiction under sub-section (1) over any project referred thereto, the same shall be referred to the Central Government for decision thereon.

Power of Board to make regulations.

88. The Board may make regulations consistent with the Act and the rules made thereunder, to provide for—

(a) regulating the time and place of meetings of the Board and the procedure to be followed for the transaction of business at such meetings;

(b) delegation of powers and duties of the Chairman or any officer of the Board;

(c) the appointment and regulation of the conditions of service of the officers and other staff of the Board;

(d) any other matter for which regulations are considered necessary by the Board.

Allocation of water resources.

89. The term of the Krishna Water Disputes Tribunal shall be extended with the following terms of reference, namely:—

(a) shall make project-wise specific allocation, if such allocation have not been made by a Tribunal constituted under the Inter-State River Water Disputes Act, 1956;

33 of 1956.

(b) shall determine an operational protocol for project-wise release of water in the event of deficit flows.

Explanation.— For the purposes of this section, it is clarified that the project specific awards already made by the Tribunal on or before the appointed day shall be binding on the successor States.

Polavaram Irrigation Project to be a national project.

90. (1) The Polavaram Irrigation Project is hereby declared to be a national project.

(2) It is hereby declared that it is expedient in the public interest that the Union should take under its control the regulation and development of the Polavaram Irrigation Project for the purposes of irrigation.

(3) The consent for Polavaram Irrigation Project shall be deemed to have been given by the successor State of Telangana.

(4) The Central Government shall execute the project and obtain all requisite clearances including environmental, forests, and rehabilitation and resettlement norms.

Arrangements on Tungabhadra Board.

91. (1) The Governments of the successor States of Andhra Pradesh and Telangana shall replace the existing State of Andhra Pradesh on the Tungabhadra Board.

(2) The Tungabhadra Board shall continue to monitor the release of water to High Level Canal, Low Level Canal and Rajolibanda Diversion Scheme.

PART X

INFRASTRUCTURE AND SPECIAL ECONOMIC MEASURES

Successor States to follow principles, guidelines, etc., issued by Central Government.

92. The principles, guidelines, directions and orders issued by the Central Government, on and from the appointed day, on matters relating to coal, oil and natural gas, and power generation, transmission and distribution as enumerated in the Twelfth Schedule shall be implemented by the successor States.