Chapter **4**

Theoretical Orientation: The Concept and Application

The geographical area of the country is 328.089 million hectares out of which, 145 million hectares (44.20%) is under cultivation. Rainfed agriculture constitutes 67% of the total cultivated area (97.15 m.ha.) and it contributes around 44% of the total food grain production. A wide variety of crop and more than 82% of pulses are grown in dry land. The most significant fact is that more than 70% of the raw materials of oilseeds and cotton required for agro-industries are usually produced in rainfed areas. It is note-worthy that rainfed agriculture has considerable production potential which has not been fully trapped. The major abiotic constraints that cause unsustaining of rainfed agriculture includes low and variability in rainfall, declining soil fertility and extension of cultivation to marginal lands as well as accelerated soil degradation followed by decrease in soil guality and low farm productivity. Sustainability in dry land areas can be achieved by designing programmes to maintain the synergistic relationships between land and water cycle, raising productivity as well as restore, reclaim and rehabilitate the degraded lands.

3.1: Initiative on Watershed Development Programme

Watershed Development projects integrating all line department activities in designated areas had actually started in Odisha in a modest way in the beginning of VIII Five Year Plan where three major projects viz. Integrated Watershed Development (Plains) Project (IWDP), National Watershed

Watershed Development for Tribal People: The Approach and ImpactResearch Book 2017ISBN: 978-93-85822-31-565

Development Project for Rainfed Areas (NWDPRA) and Indo-Danish Comprehensive Watershed Development Project (IWCWDP) were launched in quick successions. Taking into the past experience, the Director of Soil Conservation had been declared as the nodal agency to implement all the projects. Apart from this, Watershed Projects were also implemented under the schemes such as Employment Assurance Schemes (EAS), Drought Prone Areas Programme (DPAP) and Integrated Wasteland Development Programme (IWDP). It has been observed that in most of the programme, watershed people were only associated in a passive manner. Watershed projects had remained poor because of low capacity of field machinery and administrative/bureaucratic problems. An appropriate institutional arrangements, human resource development and creation of awareness at all levels had been felt necessary for effective implementation of watershed development programme.

3.2: National Watershed Development Programme

The Ministry of Rural Development, Government of India constituted technical committee under the Chairmanship of Prof. Hanumantha Rao during 1994 to study the implementation and impact of these programmes. The Committee recommended that a common set of guidelines, objectives, strategies and expenditure norms should be evolved integrating the features of all these programmes under the Ministry of Rural Development.

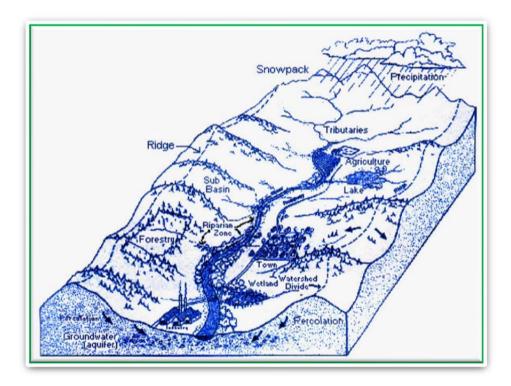


Fig. 1: Watershed Watershed is a geo-hydrological unit of area which drains the entire run-off to a single outlet.

3.3: Formulation of guideline

Ministry of Rural Development, Government of India had studied different outstanding watershed programmes of success particularly at Ralegan Siddhi and Adgaon in Maharashtra, Kabbanala and Mittenari in Karnataka as well as Jhabua in Madhya Pradesh, all of which showed that drought can be beaten. Experience and knowledge gained through these success stories motivated the Ministry to provide a nation wide guideline for the implementation of the programme. The guidelines have been finalized after extensive consultation with the State Government professionals, research institutes and Non-Government Organisations.

3.4: Implementing Agency

The primary responsibility of implementation of watershed development programmes are rest with the State Governments. The Central Government may provide technical guidance, coordination, training and research inputs in addition to monitoring the progress of implementation and evaluation of the major programmes. So, the success of the programme depends on how effectively, it is being implemented at the State level.Thus, the National Watershed Development Programme was implemented in the country during 1995. The guideline was further simplified its procedure in August, 2001 and also involved the Panchayati Raj institutions for more meaningful planning, implementation and management of activities in rural areas.

3.5: Modification of the guideline

In order to facilitate the adoption of the basic requirements of a reformed watershed programme, the Department of Land Resources within the Ministry of Rural Development constituted a technical committee under the Chairmanship of Shri S. Parthasarathy during 2005 to address major issues in watershed programmes and recommending viable strategies including mechanism for effective implementation. The committee proposed for the setting up of a National Authority for Rainfed Areas endowed with the autonomy and flexibility to respond innovatively to local needs and with clear accountability for performance during 2006. The Drought Prone Area Programme (DPAP), Desert Development Programme (DDP) and Integrated Watershed Development Programme (IWDP) were merged into a single modified programme called the Integrated Watershed Management Programme (IWMP) during 2009.

The implementation of new common guidelines for watershed development projects issued during 2008 and reissued with minor modifications in 2011 required a major change in the mode of implementation of the programme. Therefore, the Ministry of Rural Development constituted another committee under the Chairmanship of Dr. Mihir Saha, Member, Planning Commission to revise the common guidelines to provide necessary flexibility and to ensure momentum to

Watershed Development for Tribal People: The Approach and ImpactResearch Book 2017ISBN: 978-93-85822-31-568

Integrated Watershed Management Programme, while strengthening its innovative feature. The committee made some modifications after thoroughly reviewed the duration, professionalization, capacity building, institution building, role of civil society, ridge to valley approach, size of watershed, higher unit cost, smoother fund release procedures, focus on physical outcomes and monitorable indicators as well as setting up a central level nodal agency. Thus, the new common guidelines for watershed development project was finalised and developed during 2012.

3.6: Objective

The principal objectives of the watershed development programme are listed below:

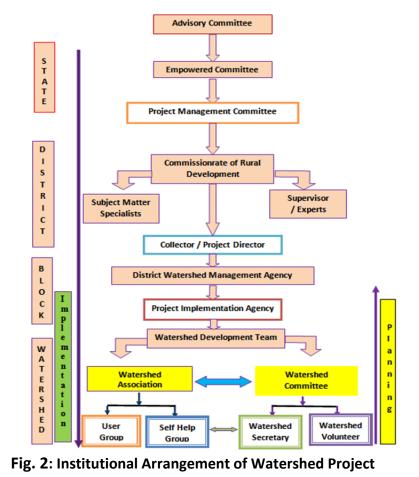
- i. Increase in the availability of surface and ground water to meet the needs of drinking water, drought proofing and protective irrigation
- ii. Regeneration of degraded natural resources, reducing soil erosion and restoration of ecological balance
- iii. Improvement of land productivity in rainfed areas
- iv. Promoting sustainable livelihoods and diversifying livelihood options especially for small and marginal farmers and the asset-less persons particularly women
- v. Strengthening local institutions and people's empowerment especially women
- vi. Promoting location specific technological solutions based on local resources and local knowledge
- vii. Mitigating the adverse impact of climate change and promoting adaptation strategy

3.6.1: Guiding principle

The guiding principles of the watershed programme may be summarised as:

i. Ensuring equal opportunities for women and men to ensure mainstreaming of gender equity

- ii. Social and economic equity for livelihoods of assetless persons particularly Scheduled Castes and Scheduled Tribes
- iii. Establishing suitable institutional arrangements within the overall framework of the Panchayati Raj institutions
- iv. Community participation
- v. Location specificity
- vi. Accountability and transparency
- vii. Integration of information technology and production systems related technologies



Watershed Development for Tribal People: The Approach and ImpactResearch Book 2017ISBN: 978-93-85822-31-570

3.7: Institutional arrangement

Central Level Nodal Agency, Central Watershed Data Centre and National Rainfed Area Authority have been established at the central level to perform the following functions.

3.7.1.1 Central Level Nodal Agency (CLNA)

- a. Facilitate allocation of the area for taking projects among the States
- b. Organise steering committee meetings for taking decisions and clearance of IWMP proposals
- c. Facilitate smooth flow of funds for implementation
- d. Support capacity building programmes at all levels
- e. Support, augment and initiate Information, Education and Communication (IEC) activities
- f. Ensure close monitoring
- g. Provide necessary support for states that facing constraints in effectively implementing IWMP
- h. Establish suitable systems for field visits, monitoring, evaluation and learning as well as impact assessment
- i. Preparing panel of national level evaluation agency for evaluation
- j. Facilitate participation in international, national and regional conferences, seminars and workshops, study tours etc.

3.7.1.2 : Central Watershed Data Centre (CWDC)

- i. Storing and generating related information, data and knowledge
- ii. Collate summary data for the entire country
- iii. Equipped with various GIS thematic layers for cadastral, watershed, soil, land use, socio-economic parameters etc.
- iv. Integral part of Central Level Nodal Agency and Department of Land Revenue

3.7.1.3: National Rainfed Area Authority (NRAA)

- i. Supporting the process of preparing strategic plan at the State and district level as per the agro-climatic and socio-economic conditions
- ii. Assisting in preparing state specific technical manuals
- iii. Providing technical knowledge and expertise to the SLNA and implementing agencies
- Assist in building partnerships among research institutions, implementing agencies, leading NGOs for facilitating action research
- v. Conducting studies, evaluation and impact assessment from time to time improving the quality of implementation
- vi. Assisting additional funds from other sectors including private sector, foreign funding agencies etc.
- vii. Organising regional and international conferences, seminars and workshops, study tours as well as information sharing events for knowledge exchange

3.7.2: State Level Nodal Agency (SLNA)

A dedicated State Level Nodal Agency either in the name of the Department, Mission, Society or Authority is to be constituted by the concerned State Government having an independent Bank account. The main functions of the SLNA are as follows.

- i. Preparing a perspective and strategic plan of watershed development for the State on the basis of the plans prepared at the block and district level indicating implementation strategy, expected outcomes, financial outlays for appraisal of the Department of Land Resources, Government of India for clearance
- ii. Establish and maintain a State level data cell and connect in online with the central level data centre
- iii. Provide technical support to watershed cell cum data centre throughout the State

- iv. Develop state specific operational guidelines, strategies for capacity development, monitoring, evaluation and learning system
- v. Approve Project Implementation Agency identified at the district level
- vi. Ensure regular and quality monitoring of watershed projects in the State
- vii. Constitute a panel of independent institutional evaluators for all watershed projects within the State being approved by Central Level Nodal Agency
- viii. Ensure convergence with related schemes like MGNREGS, NRLM, NHM, RKVY etc.

3.7.3: Watershed Cell cum Data Centre (WCDC)

A separate cell called the Watershed Cell cum Data Centre has to be established at the district level, either at DRDA, Zilla Parishad or district level implementing agency. The Collector and District Magistrate is the Chairman of WCDC. The functions of the WCDC are as follows:

- i. Identifying Potential Project Implementing Agency (PIA)
- ii. Overall responsibility for the preparation of strategic and annual action plan for the district
- iii. Providing professional technical support to PIAs in planning and execution of watershed development projects
- iv. Develop action plan for capacity building through resource organisations
- v. Approve the detailed project reports after verification and recommend to SLNA for further approval
- vi. Regular monitoring, evaluation and smooth flow of funds to the watershed development projects
- vii. Facilitate convergence and coordination with relevant programmes of related district developmental departments

viii. Establish and maintain district level data cell and link to the State and Central level data centre

3.8: Institutional arrangement at Project level

3.8.1: Project Implementing Agency (PIA)

The State Level Nodal Agency has to evolve appropriate mechanism in selecting and approving the PIAs for implementation of the Watershed Development Projects. Relevant line departments, autonomous organisations, voluntary organisations and corporate agencies can be selected as PIA. The PIA has to provide necessary technical guidance to Gram Panchayats, Watershed Committees, User Groups, Self Help Groups and other institutions engaged in preparation detailed project reports through Participatory Rural Appraisal (PRA) exercise, community organisation and training for the village communities, supervise activities, inspect and authenticate project accounts, encourage low cost technologies and build upon indigenous technical knowledge, monitor and review the overall project implementation and set up institutional arrangements for post project operation including repair, maintenance and use of the created asset.

After approval of the detailed project report by the Gram Sabha, PIA shall submit the report for approval of WCDC. He has to submit periodic progress report and arrange physical, financial and social audit of the work undertaken. The PIA will facilitate the mobilisation of additional financial resources through convergence from other programmes such as MGNREGA, NRLM, RKVY, NHM, Tribal Welfare schemes etc.

3.8.2: Watershed Development Team (WDT)

The Watershed Development Team (WDT) is an integral part of the PIA. Each WDT have at least four full time members broadly with knowledge and experience in the discipline of agriculture, soil and water conservation engineering/Agril. Engineering/water management, Animal production as well as social mobilisation and institutional building out of which one should be a woman having at least a professional degree. The salaries of

the WDT members will be met from the professional human resources deployment head.

Role and responsibilities of WDT

- i. Assist Gram Panchayat/Gram Sabha in constitution of the Watershed Committee and their functioning
- ii. Organise watershed communities into user groups, self help groups
- iii. Mobilising women to ensure their interest and participation
- iv. Conducting the participatory base-line surveys, training and capacity building
- v. Preparing detail annual and perspective plans
- vi. Facilitating the development of livelihood opportunities for the asset-less persons specially women
- vii. Maintaining project accounts as well as physical, financial and social audit of the work undertaken
- viii. Facilitating conflict resolution
- ix. Setting up suitable arrangements for post-project operation, maintenance and future developments of the assets created

3.9: Institutional arrangements at the village level

3.9.1: Self Help Group

Self Help Groups (SHGs) are formed basing on the social affinity or common interest of its members. Efforts have to be made to promote self help group and group action for improving livelihood opportunities particularly of resource poor. Representatives of Self Help Groups would be the members of the watershed committee. Each SHG will be provided with a revolving fund of an amount decided by the Department of Land Resources.

3.9.2: User Group

The Watershed Committee (WC) shall also constitute user groups in the watershed area with the help of WDT. Each user group shall consist of

Watershed Development for Tribal People: The Approach and ImpactResearch Book 2017ISBN: 978-93-85822-31-575

those who are likely to derive direct benefits from a particular watershed work or activity. The members of the user group should have direct access to watershed resources and entitlements to use them. The Watershed Committee with the help of WDT shall facilitate resource use agreements among the user groups basing on equity and sustainability. The user groups shall also be responsible for repair and maintenance of assets created, productivity enhancement related activities and further development of resources after the project period.

3.9.3: Labour group

Families predominantly depend on wage employment have to be organised after explaining the wage related opportunities. The WDT would facilitate negotiations between watershed committee, user groups and labour groups on timing, rates and nature of work. The Watershed Committee would have at least two representatives of labour groups.

3.9.4: Watershed Committee (WC)

Each Watershed has to constitute the Watershed Committee (WC) to implement the watershed project. It has to be registered under the Society Registration Act of 1860. The watershed people may select or appoint any suitable person among them as the Chairman of the Watershed Committee. The Watershed Committee will consist of at least 10 members. Half of the members shall be the representatives of SHGs, user groups, labour groups, SC/ST community and women. One member of WDT shall be represented in the Watershed Committee.

Roles and responsibilities of Watershed Committee

- i. Guide and participate actively in the base line survey
- ii. Participate in identification of beneficiaries based on equity and social justice
- iii. Participate actively in formation of users and self help groups
- iv. Mobilise voluntary contributions for different activities
- v. Facilitate conflict resolution by developing appropriate principles and institutional mechanism for the same

- vi. Supervise development activities and maintain project accounts
- vii. Initiate steps for post project operation, maintenance and further development of assets created during the project period

3.9.5: Gram Panchayat/Watershed Association

Each family residing in the watershed areas must be a member, otherwise he will be deprived of all the benefits. The major roles performed are as follows.

- i. Supervise, support and advise Watershed Committee from time to time
- ii. Authenticate the accounts/expenditure statements
- iii. Facilitate the convergence of various projects/schemes to institutions of watershed development project
- iv. Maintain asset register and retain it after closure of the project
- v. Allocate usufruct rights to deserving user groups/SHGs over the assets created
- vi. Regular review of physical and financial progress of the watershed project

3.10: Budgetary Allocation

The Watershed Development Project has a steering committee having members from Planning Commission, National Rainfed Area Authority, technical experts from different scientific institutions, voluntary organisations, related departments of the Central and State Governments. The State Level Nodal Agency is delegated with powers of sanctioning projects as per appraisal of the steering committee. The guideline proposes a unit cost of Rs.15, 000/- per hectare for normal areas having ideal size of 3000-7000 hectare and Rs.18, 000/- per hectare for desert, hilly and IAP (Integrated Action Plan) districts. The funding pattern between the Government of India and State Governments is in the ratio of 90:10. The distribution of budgetary allocation for the various components for specified watershed projects has been reflected in table 3.1.

SI. No.	Component	Percentage of
		total budget
1	Entry point activity	4.00
2	Detailed project report	1.00
3	Capacity building	5.00
4	Institution building	1.00
5	Watershed development works	55.00
6	Livelihoods for asset-less people	9.00
7	Productivity enhancement activities	7.00
8	Activities under consolidated phase	1.00
9	Professional human resource deployment	10.00
10	Monitoring	1.00
11	Evaluation, learning and documentation	1.00
12	Administrative costs	5.00
Total		100.00

Table 3.1: Budgetary allocation under various components

(Source – Common Guidelines for Watershed Development Projects, Government of India. 2012).

3.11: Selection of Watershed project

Different magnitudes of watershed are found in different areas of the country. The State Level Nodal Agency has to follow the following criteria as mentioned in table 3.2 while selecting the watershed areas.

Table 3.2: Criteria fo	r selection of the watershed
------------------------	------------------------------

SI. No.	Criteria	Score assigned
1	Drinking water shortage	15
2	Percentage of net sown unirrigated area	15
3	Moisture index/DPAP/DDP block	15
4	Percentage of degraded land	15
5	Productivity potential of the land	15
6	Depth of ground water level	10
7	Percentage of small and marginal farmers	10
8	Percentage of SC/ST population	10

9	Incidence of seasonal or long term distress out- migration	10
10	Cluster approach or contiguity of watershed	10
11	Extent of deviation of actual wages of farm	5
	labour from declared minimum wages	

(Source – Common Guidelines for Watershed Development Projects, Government of India. 2012)

All total 20,079 watersheds were identified in Odisha out of which 4836 watersheds were treated so far. The watershed guidline developed by the Government of India has fixed criteria for selection of watersheds. These criteria have been given weightage on the basis of priorities. The district Nodal Agency and Project Implementing Agency have to give weightage accordingly to each of the untreated watersheds in the operational area. Watersheds securing comparatively more weightage will be selected under the project.

3.12: Procedure for release of fund

The Central share of funds released to the State Level Nodal Agency (SLNA) in three phases i.e. preparatory, work as well coordination and withdrawal phase spread over the project period of five years. Project funds relating to watershed development works, livelihoods for asset-less persons and productivity enhancement activities are ultimately flow to the Watershed Committee. Project fund relating to evaluation, learning and documentation has to be with SLNA. Project fund relating to all other items has been released to Project Implementing Agency (PIA). The funds are ordinarily released in two instalments every year i.e. 60% during 1st April of the financial year and rest amount after utilisation of the 1st instalments.

3.13: Phases of watershed project

The time limit for preparatory phase is 1.5 years followed by works phase for three years and rest six months towards consolidation and withdrawal phase.

3.13.1: Preparatory phase

The major objective of the preparatory phase is the empowerment of local institutions i.e. Watershed Committee, self help groups and user groups in

Watershed Development for Tribal People: The Approach and ImpactResearch Book 2017ISBN: 978-93-85822-31-579

close partnership with the Gram Panchayat or Gram Sabha. The major activities undertaken are awareness generation about the understanding of the project, entry point activities like urgent need of the communities such as revival of common and natural resources, drinking water, drainage system, repair, restoration and up gradation of traditional water harvesting structures, village tanks etc. Besides, capacity building of all stakeholders, participatory preparation of detail project report has to be undertaken in the preparatory phase.

3.13.2: Work phase

It is the heart of the programme where detailed project report will be implemented. Different activities such as watershed works mostly ridge area treatment, drainage line treatment, development of water harvesting structures, nursery raising for fodder, fuel, timber, horticultural crops, insitu soil and moisture conservation as well as drainage management measures, etc. are undertaken. Besides; productivity enhancement activities such as popularisation of new technologies, promotion of seed banks, seed villages, livestock improvement, fisheries development, promotion of agro-processing, marketing arrangements, etc. are to be undertaken. Bee keeping, backyard poultry and other livestock related livelihood options have to be promoted to the asset-less persons in the watershed areas with equitable sharing of benefits. Regular monitoring, mid-term evaluation, learning and documentation are also being undertaken in the work phase.

3.13.3: Consolidation and withdrawal phase

The major objectives of this phase are consolidation and completion of various works, preparation of project completion report indicating details of the status of each intervention, documentation of successful experiences as well as terminal evaluation of the project and completion of necessary project closure formalities. The local institutions may be strengthened to carry out maintenance of the assets created during the period along with sustainable use.

3.14: Watershed Development fund

One of the mandatory conditions for the selection of villages for watershed project is the contribution of the people towards Watershed Development Fund. There should be minimum of 10.00% contribution of the cost structures on natural resource management works executed on private land. In case of Scheduled Caste, Scheduled Tribe, small and marginal farmers, the minimum contribution shall be 5% of the cost of the said works executed on their land.

The contribution would be acceptable either in cash at the time of execution of works or materials or voluntary labour where the equivalent monetary value will be transferred from the watershed project account to the watershed development fund bank account. User charges, sale proceeds, other contributions, disposal amounts of intermediary usufruct rights have also to be deposited in the said account. Income earned from created assets and common property resources shall also to be credited to the watershed development fund. The fund shall be reserved for the maintenance of assets created on community land or for common use under the project after completion of phase II.

3.15: Monitoring, Evaluation, Learning

3.15.1: Monitoring

Regular monitoring has to be carried out at each stage. Both process and outcome monitoring are to be undertaken. The Project Implementing Agency shall collect quarterly progress reports from the Watershed Committee countersigned by the President who have to consolidate and submit it to Watershed Cell cum Data Centre who in turn submit a consolidated project wise quarterly progress report to the State Level Nodal Agency (SLNA). Besides, SLNA has to proposed different streams of monitoring such as internal monitoring by project teams (PIA/WCDC/SLNA), progress monitoring, on-line monitoring, self monitoring by communities, sustainable monitoring, social audits, independent and external monitoring by independent agencies as well as process monitoring.

3.15.2: Evaluation

There is a national panel of evaluating agencies with the Department of Land Resource who have to undertake a minimum percentage of evaluations and impact studies to ensure objectivity as well as infuse a national perspective. There will also be a State Level Nodal Agency panel of evaluators approved by the Department of Land Resource. The panel will include only institutions and agencies not individuals. But, the agency should not be a Project Implementing Agency as well as not belong to the area being evaluated.

Each evaluation will include physical, financial and social audit of the work done. Further, fund release depends on a satisfactory report from the evaluators. Besides; three levels of evaluations i.e. on completion of preparatory phase activities, mid-term evaluation and post- project evaluation are to be conducted to assess the status of watershed related interventions. Operational guidelines on evaluation have been issued by the Department of Land Resources, Government of India.

3.15.3: Learning

Systematic efforts are to be made to learn from the field experiences and also from feedback of independent sources. The following methods have been proposed to enable the learning process at different levels.

- a. Systematic analysis of monitoring data for all types of monitoring on a regular basis by the internal team and sharing with project authorities or policy makers
- b. Engaging services of independent academic and voluntary organisations for taking research and action research projects
- c. Organising regular sharing, reflective and learning events to learn from field experiences, monitoring exercises and academic/research studies at district, state and national level

3.15.4: Documentation

Documentation of concurrent processes is also essential part of the monitoring and evaluation. Documentation of case studies and success stories are also part of the monitoring and evaluation. The documentation

Watershed Development for Tribal People: The Approach and ImpactResearch Book 2017ISBN: 978-93-85822-31-582

should follow both before and after status along with details including Gram Panchayat Co-ordinators.

3.16: Outcomes/End Results

Each Watershed Development Project is expected to achieve the following results by the end of the project period.

- a. All the activities and works both for arable and non-arable lands have to be completed with active participation and contribution of user groups and the community at large
- b. The Gram Panchayat and user groups are willing to take over the operation and maintenance of the assets created and made suitable administrative as well as financial arrangements for maintenance and further development
- c. All the members of the Watershed Committee have been given orientation and training to improve knowledge and update technical, management and community organisational skills
- d. Increase in availability of ground and surface water leading to greater drinking water security as well as water for protective irrigation and draught proofing
- e. Bringing cultivable fallow lands under cultivation with increase in water use efficiency
- f. Increase in cropping intensity and productivity reflecting overall increase in agricultural production
- g. Increase in income of the people with food and nutritional security to the resource poor families
- h. Improving decision making process of women significantly
- i. Members of watershed communities improve capability and experience to promote culture of collective action
- j. Development alternatives and new leadership among watershed people

The guidelines placed a central emphasis on capacity building of stakeholders and active participation right from planning, implementation and post project maintenance. Livelihood security found to be the goal of the watershed development programme with sustainable production, income as well as restoring ecological balance.

3.17: Derivation of hypothesis

According to Kerlinger, 1986, Hypothesis is a conjectural statement of the relation between two or more variables. National Watershed Development Programme aimed at active participation and involvement of the people in designing and implementing the programmes with fund utilisation as well as evaluating the progress. It is therefore presumed that the programme had made significant impact on the socio-economic upliftment of the tribal people.

The following hypothesis have been developed for the purpose of the study.

- Ha1. Watershed people have gained adequate knowledge about functioning of watershed projects
- Ha2. Watershed people are actively involved in the process of designing feasible programmes
- Ha3. Programme implementation exclusively done by the watershed people
- Ha4. Watershed Committee utilises the fund released to the watershed
- Ha5. Feasible supports are extended by the related stakeholders
- Ha6. Significant increase in production and productivity
- Ha7. Water facilities adequately available for protective irrigation and drinking water
- Ha8. Watershed beneficiaries adopt better technologies
- Ha9. Generation of income to all categories of people has taken place
- Ha10. Resource poor families ensured with food and nutritional security

- Ha11. Good coordination, cooperation and harmony established among watershed people
- Ha12. Women participate in the projects actively and that improved decision making abilities
- Ha13. Watershed development fund used exclusively for the repair, maintenance and use of the created assets after closure of the project