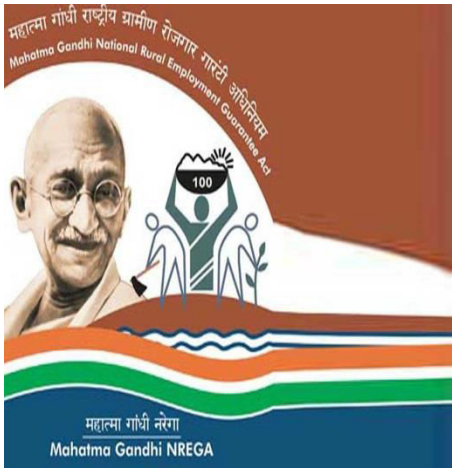
SAKSHAM: MISSION WATER CONSERVATION UNDER MGNREGS

A NATURAL RESOURCE MANAGEMENT FRAMEWORK UNDER MGNREGS FOR LABOUR BUDGET FY 2017-18



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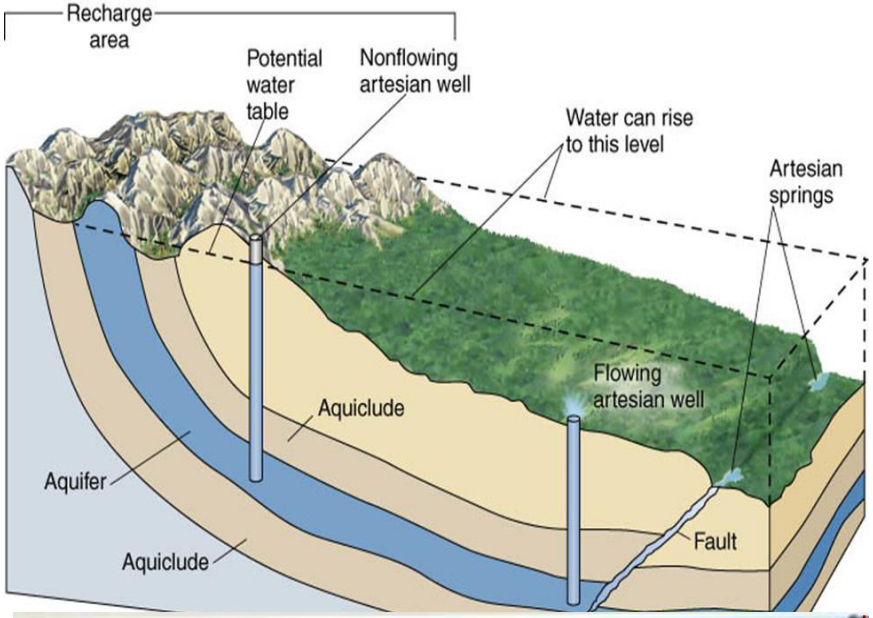
Mission Water Conservation

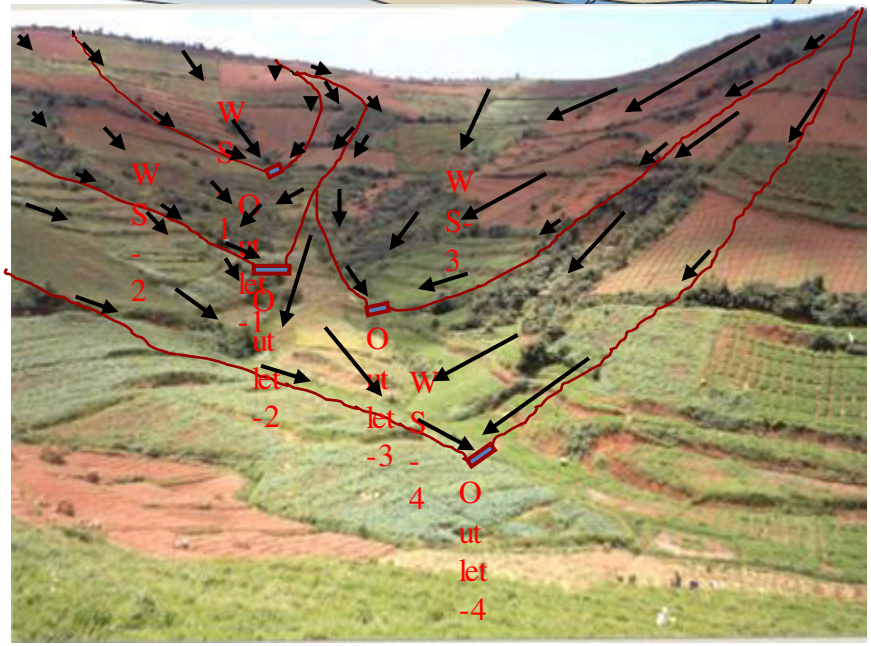
MWC - an effort to use MGNREGS resources for water conservation in scientific and technologically sound manner.

Its intention is to drought proof GPs through effective Ridge to Valley treatment through community action.

Prime Minister thrust on ‘more crop per drop’ & ‘Har khet ko pani’

The thrust of MWC is on the water stressed areas. Water conservation structures vary from region to region.





Mission Water Conservation

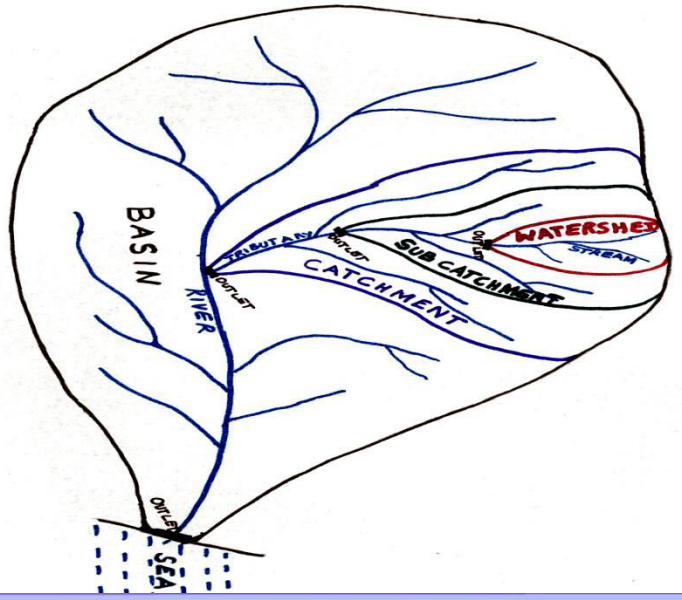
- Only 65 million hectares (45%) out of the 141 million hectares, net sown area in the country is currently under irrigation
- Remaining 76 million hectares (55%) are rainfed
- 112 districts are categorised as most **'Irrigation Deprived'**
- Grim situation due to over utilisation of groundwater - 1068 Blocks and 217 Blocks categorised as **Over Exploited Blocks** and **Critical Blocks** respectively
- During current year, 155 districts from 25 states received less than 75% of the average rainfall

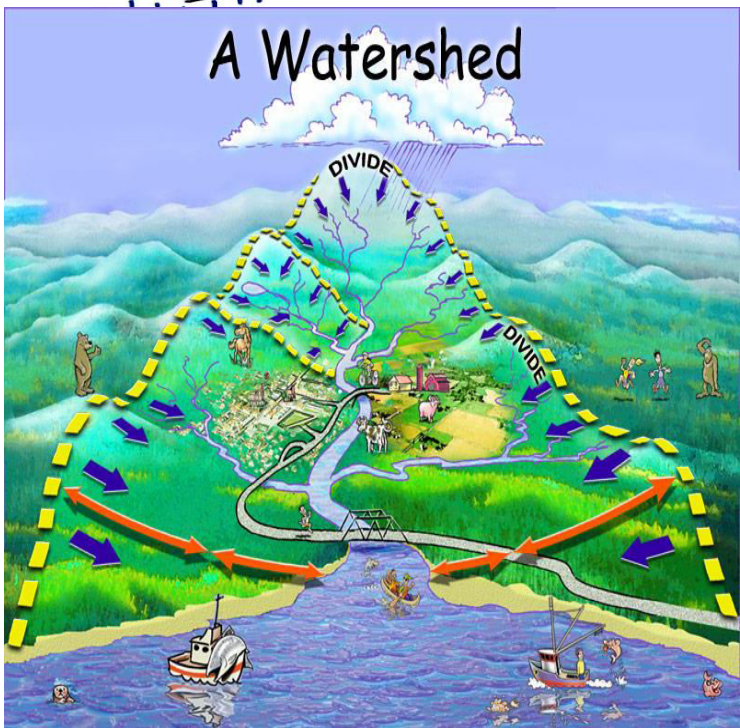
Mission Water Conservation

Framework for implementation of MWC has been allied with the operational guidelines of PMKSY and IWMP

NRM component of MGNREGS LB for 2017 -18 to be made part of the District Irrigation Plan (DIPs) of PMKSY

Regional/district level functionaries to ensure a coordination and systemic identification, planning & impltation. of projects leading to creation of sust. and productive assets for the community especially in 112 most irrigation deprived districts, 1068 over exploited (in terms of ground water) Blocks and 217 critical blocks of the country.





‘Irrigation Deprived’ Districts in India

Name of State	No of Districts	Name of State	No of Districts
Andhra Pradesh	1	Karnataka	6
Telangana	3	Madhya Pradesh	5
Assam	19	Maharashtra	23
Bihar	7	Odisha	12
Chhattisgarh	11	Uttar Pradesh	2
Gujarat	6	West Bengal	1
Jharkhand	16		
States: 13		**Districts: 112**	

‘Over Exploited’ Blocks in India

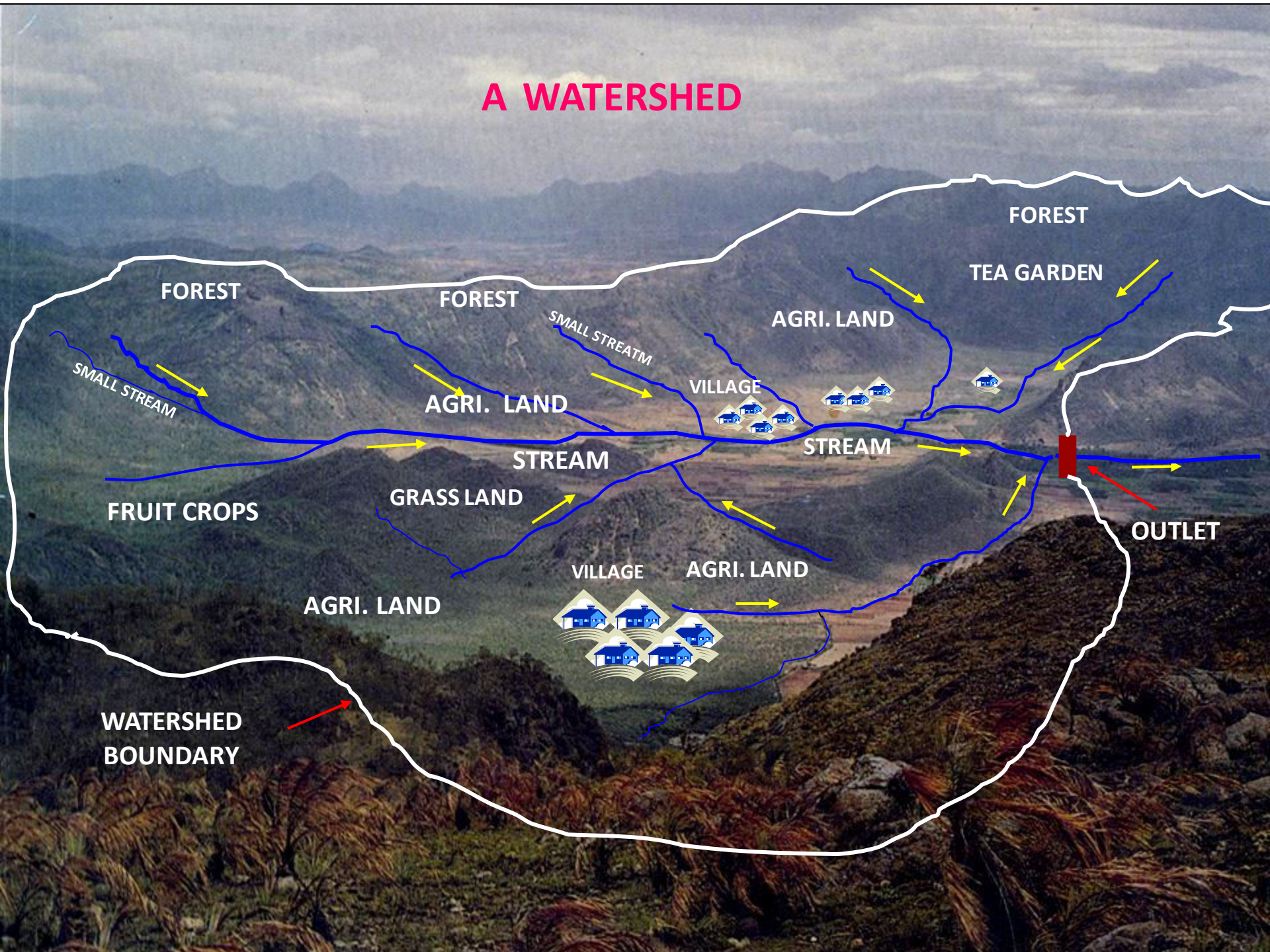
Name of State/UTs	No of Districts	No of Blocks	Name of State/UTs	No of Districts	No of Blocks
Andhra Pradesh	5	41	Kerala	1	1
Chhattisgarh	1	1	Madhya Pradesh	9	24
Daman & Diu	1	1	Maharashtra	7	10
Delhi	7	18	Puducherry	1	1
Gujarat	6	24	Punjab	16	110
Haryana	17	71	Rajasthan	29	172
Himachal Pradesh	1	1	Tamil Nadu	27	374
Jharkhand	5	6	Telangana	8	42
Karnataka	15	60	Uttar Pradesh	32	111
States: 18	**Districts: 188**		**Blocks: 1068**		

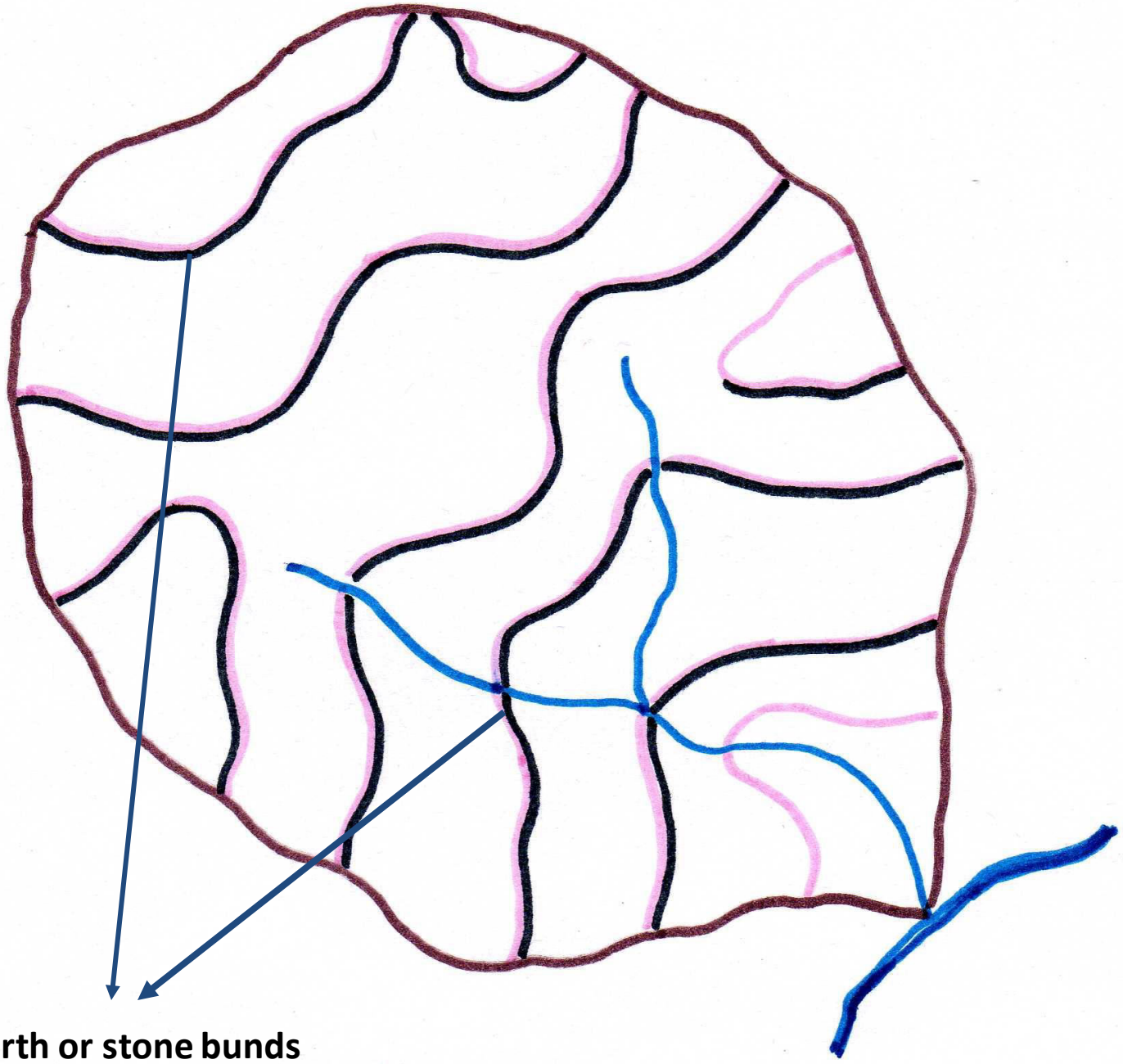
‘Critical’ Blocks in India

Name of State/UTs	No of Districts	No of Blocks	Name of State/UTs	No of Districts	No of Blocks
Andhra Pradesh	2	7	Madhya Pradesh	3	4
Telangana	5	8	Maharashtra	2	2
Chhattisgarh	2	2	Punjab	3	4
Delhi	2	2	Rajasthan	12	24
Gujarat	4	5	Tamil Nadu	20	48
Haryana	9	15	Uttar Pradesh	29	68
Himachal Pradesh	2	2	Uttarakhand	2	2
Karnataka	15	21	West Bengal	1	1
Kerala	2	2			
States: 17	**Districts: 115**	**Blocks: 217**			

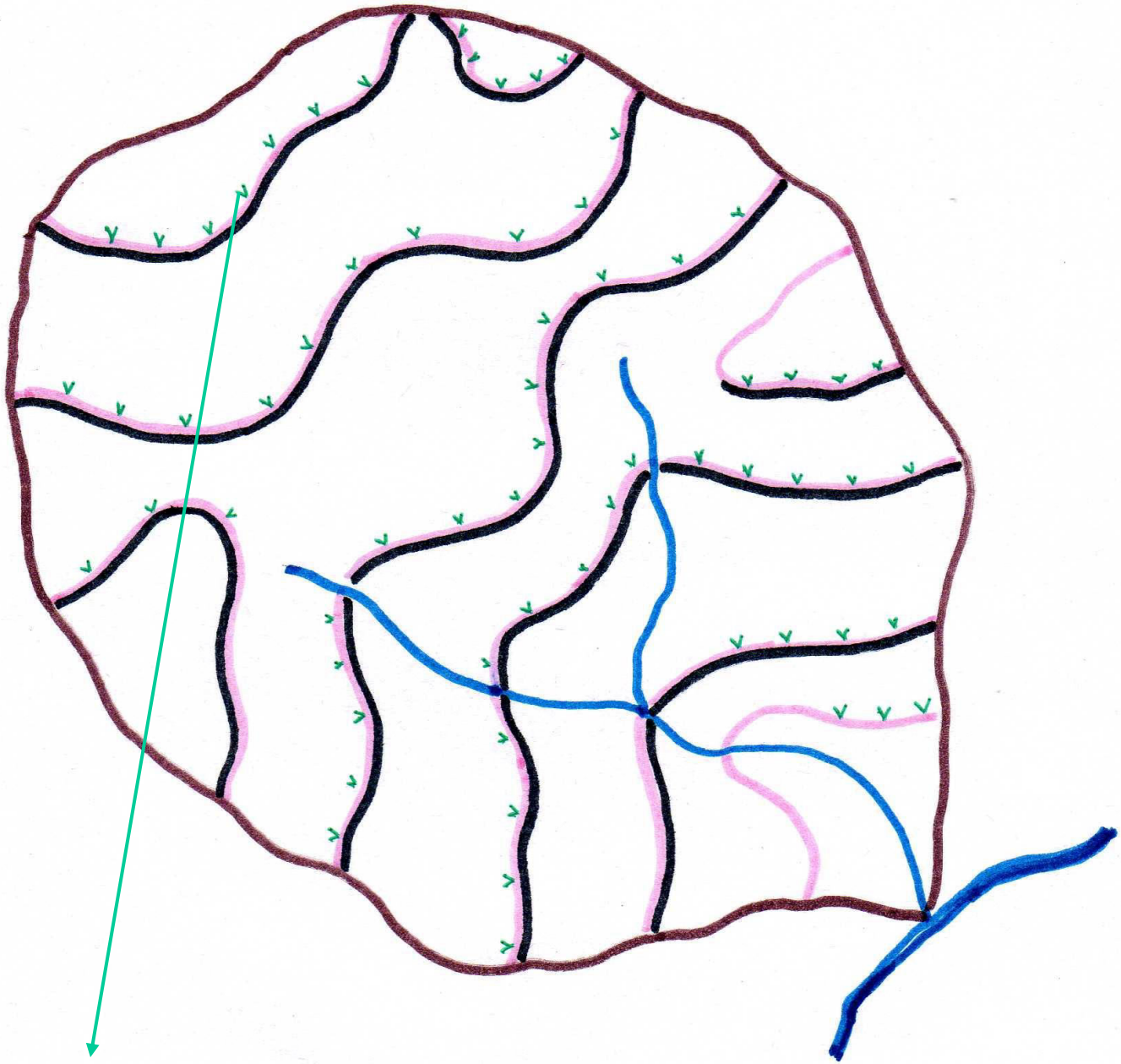
‘Rainfall Deficient ’ Districts in India-2016

Name of State/UTs	No of Districts	Name of State/UTs	No of Districts	Name of State/UTs	No of Districts
Arunachal Pradesh	5	Himachal Pradesh	4	West Bengal	1
Assam	10	Jammu & Kashmir	6	Jharkhand	3
Meghalaya	5	Rajasthan	1	Uttarakhand	3
Odisha	2	Gujarat	12	Madhya Pradesh	3
Bihar	8	Kerala	11	Chhattisgarh	2
Uttar Pradesh	31	Nagaland	2	Tamil Nadu	15
Haryana	12	Manipur	1	Karnataka	5
Punjab	10	Mizoram	1		
Andhra Pradesh	1	Tripura	1		

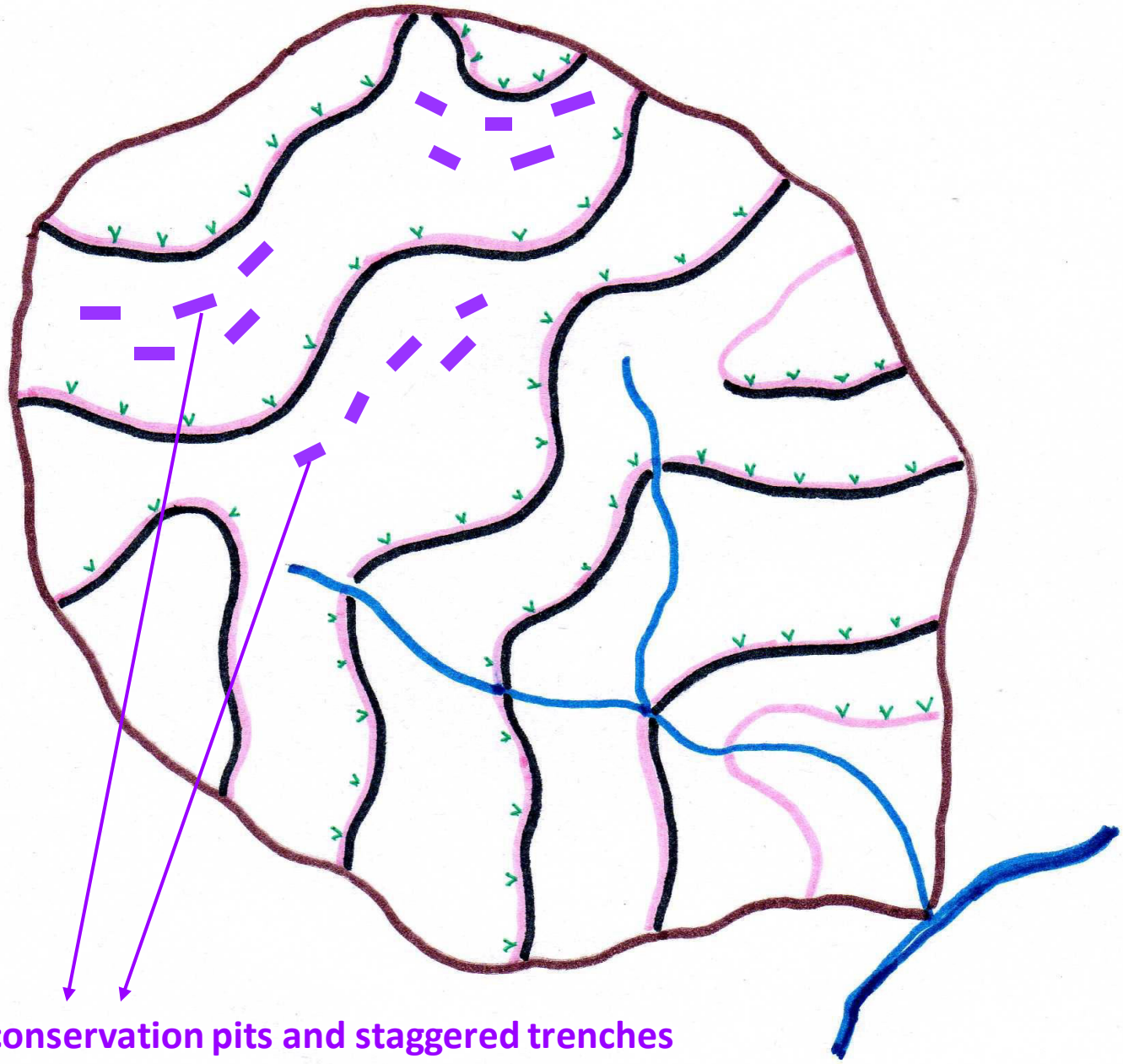

A WATERSHED
FOREST
FOREST
FOREST
TEA GARDEN
AGRI. LAND
SMALL STREAM
SMALL STREATM
VILLAGE
AGRI. LAND
STREAM
STREAM
GRASS LAND
FRUIT CROPS
OUTLET
VILLAGE
AGRI. LAND
AGRI. LAND
WATERSHED
BOUNDARY



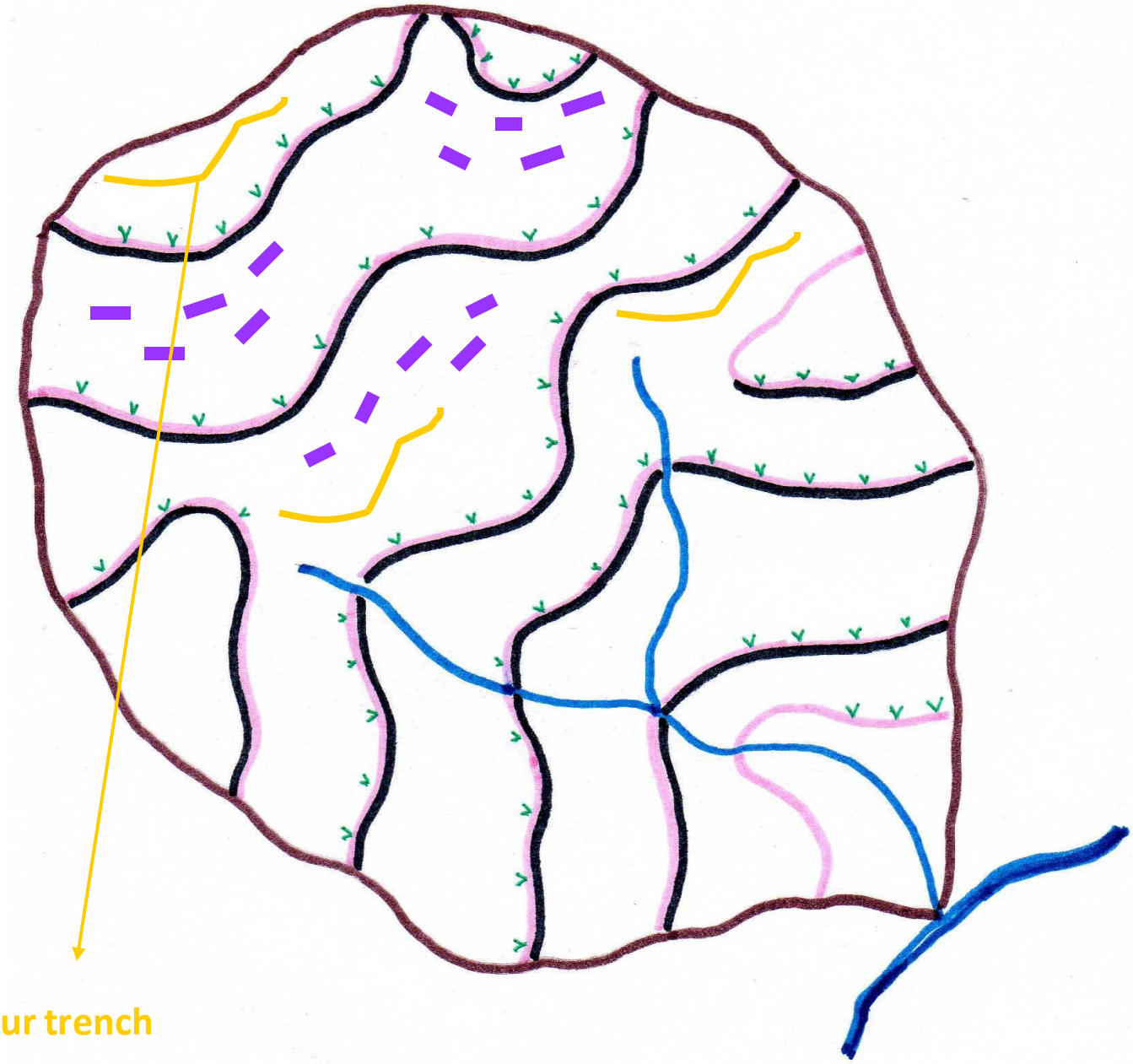
contour earth or stone bunds

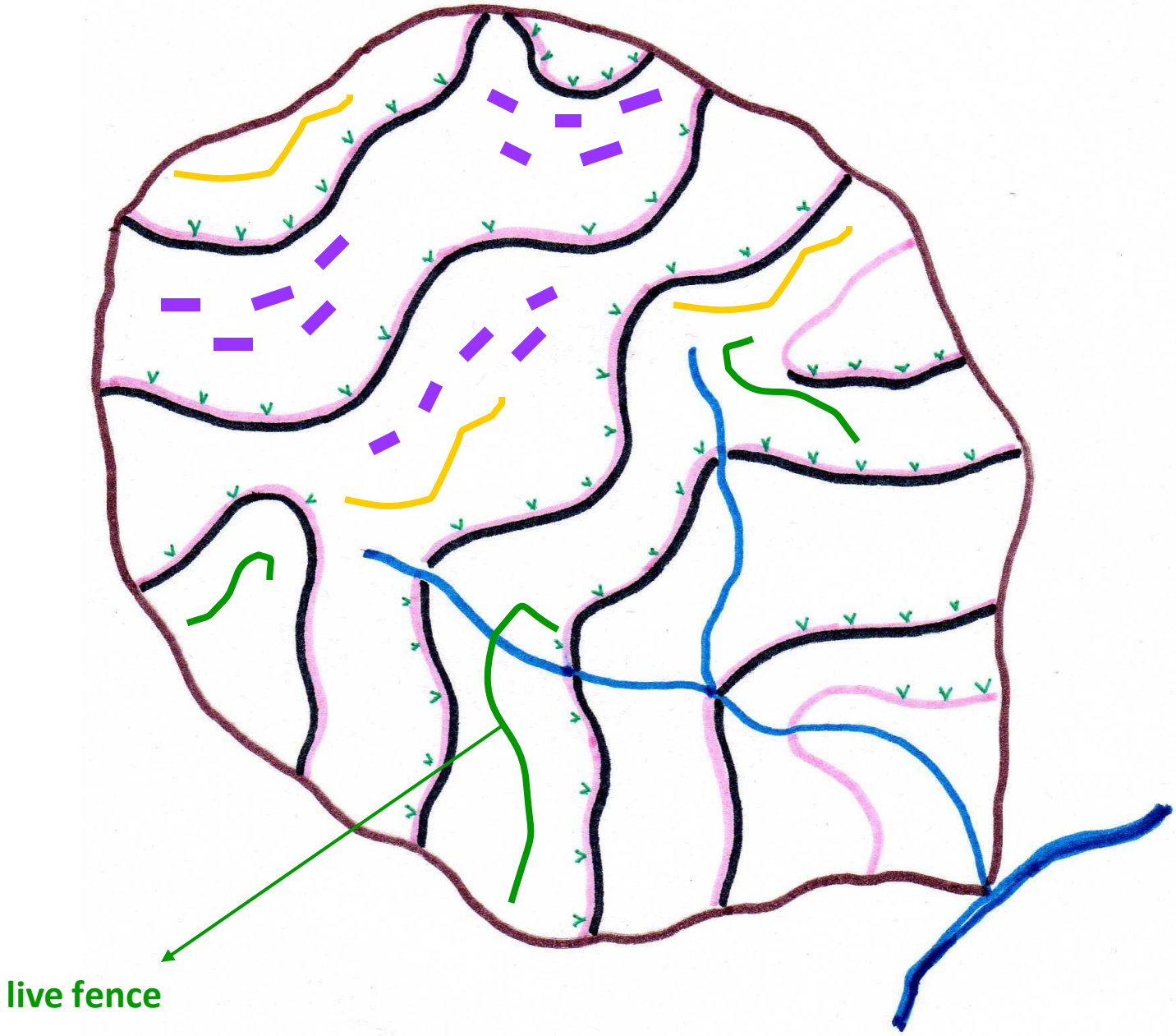


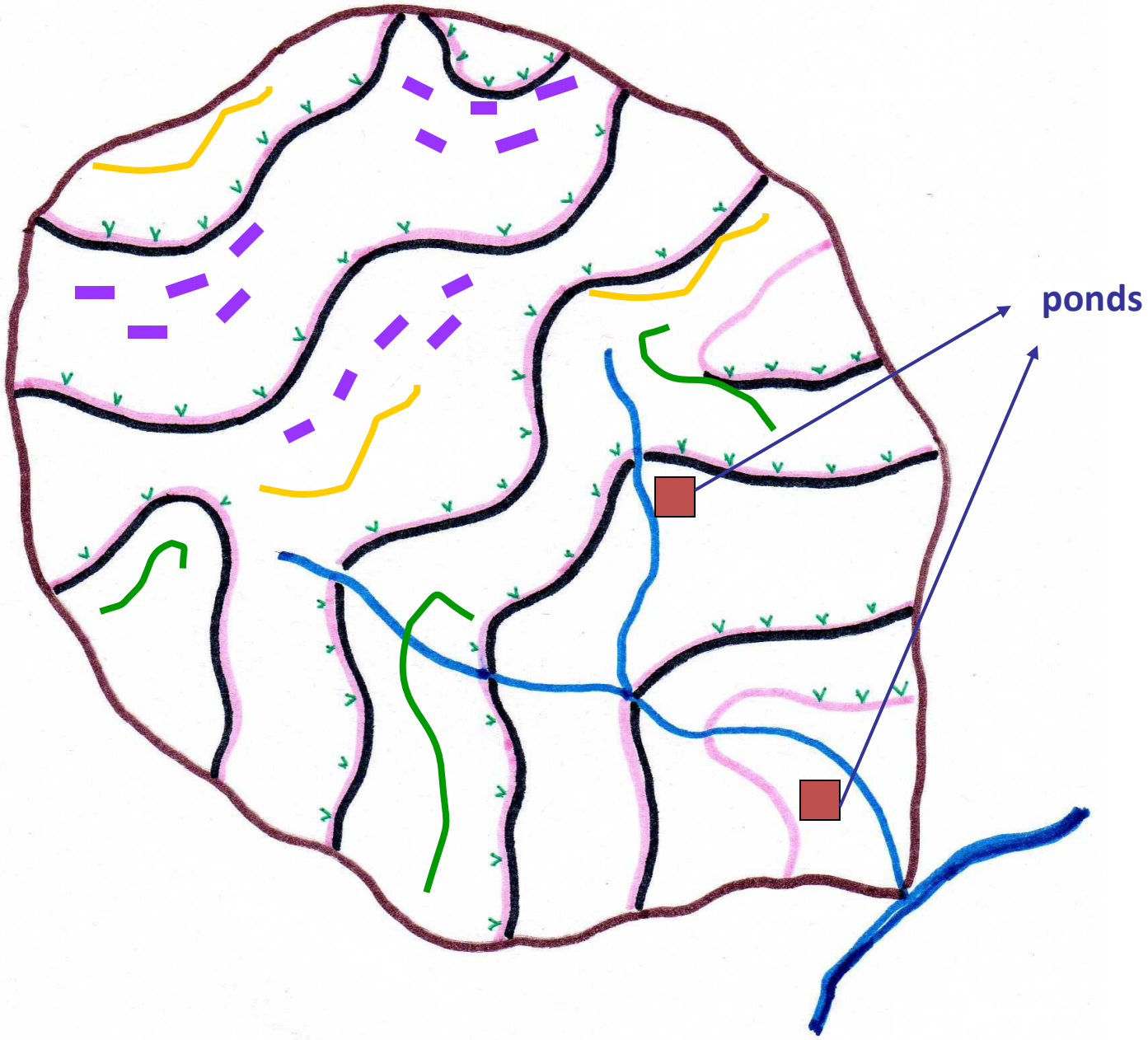
vegetative reinforcement for contour bunds using fodder grass

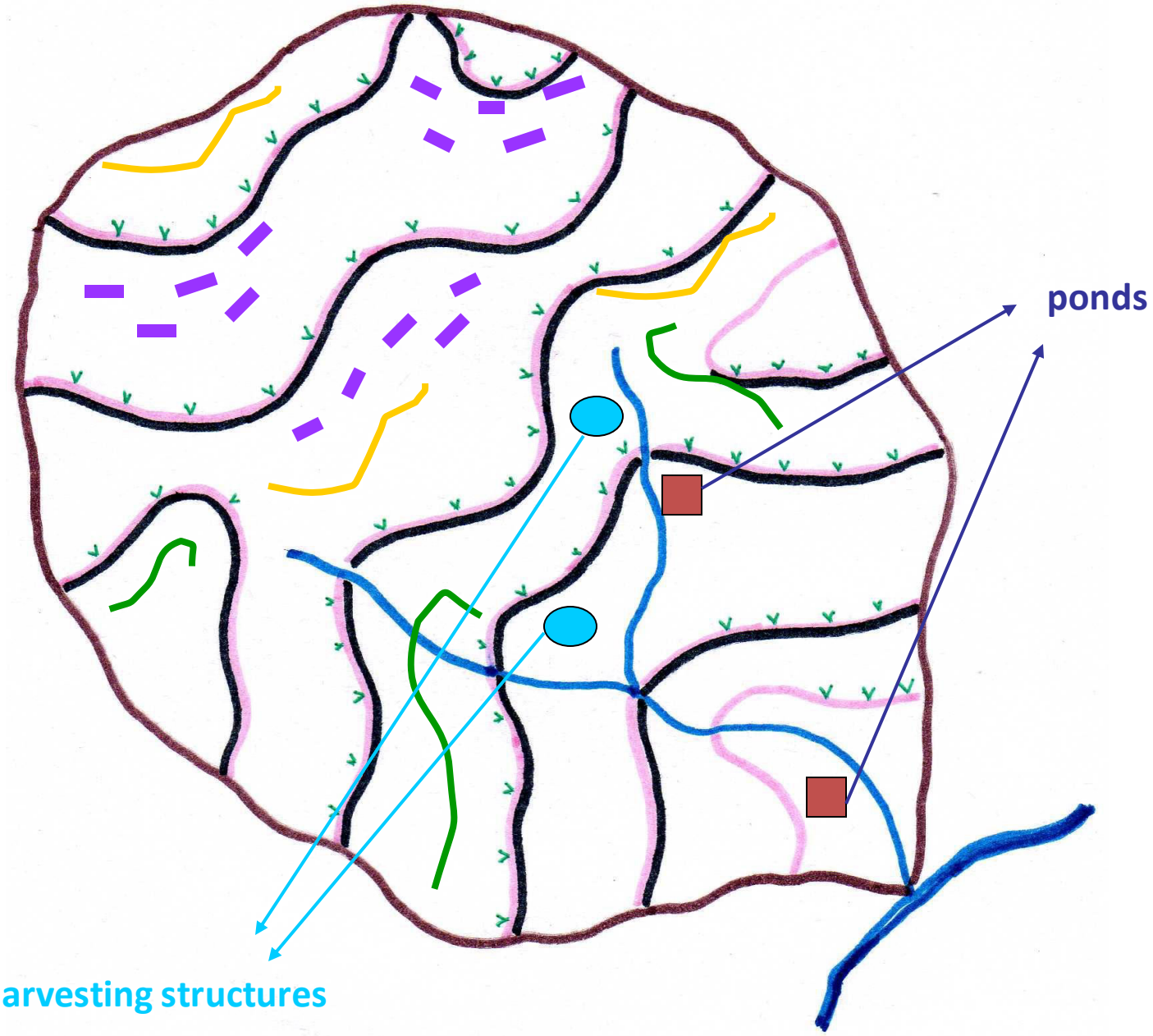


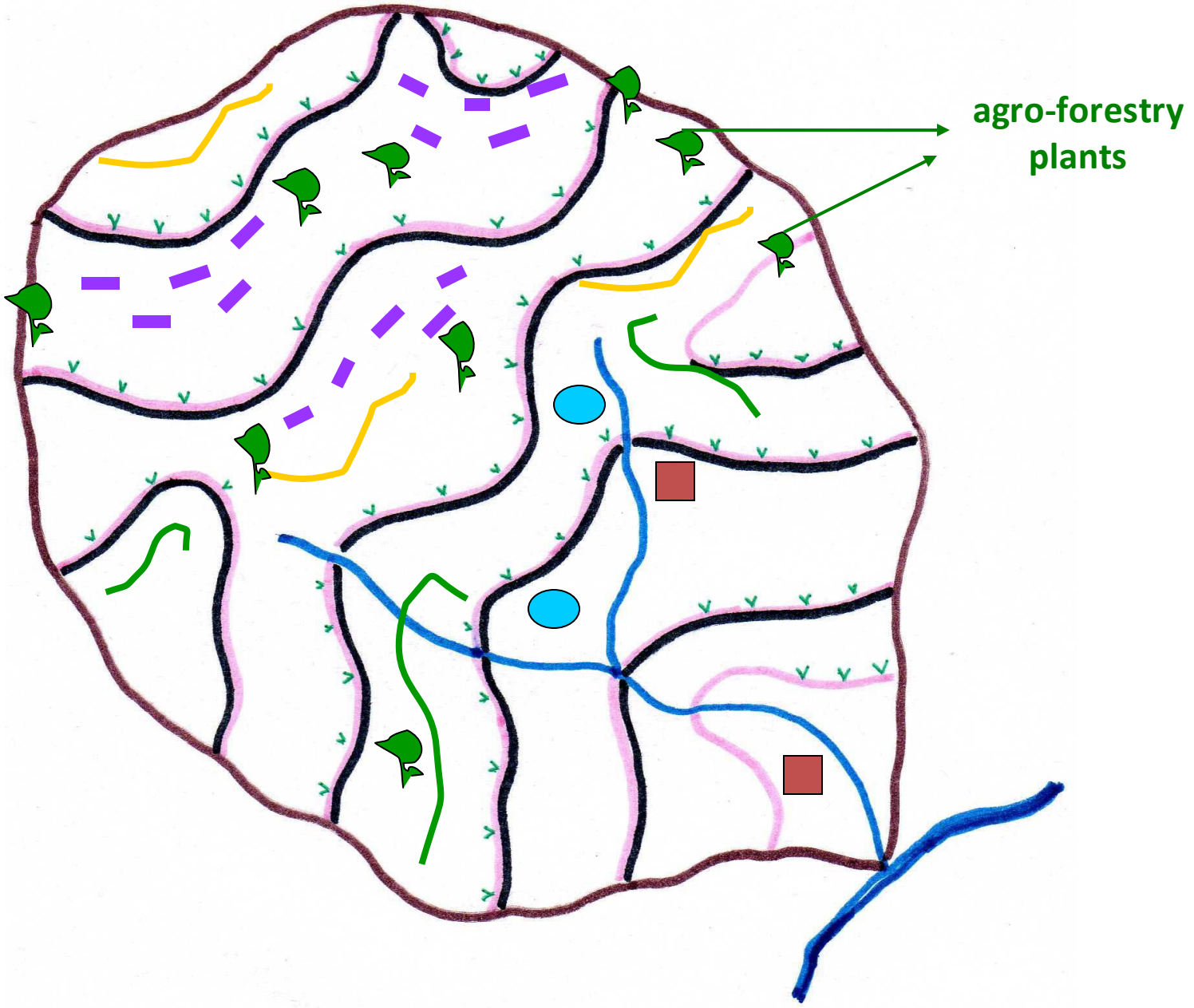
moisture conservation pits and staggered trenches

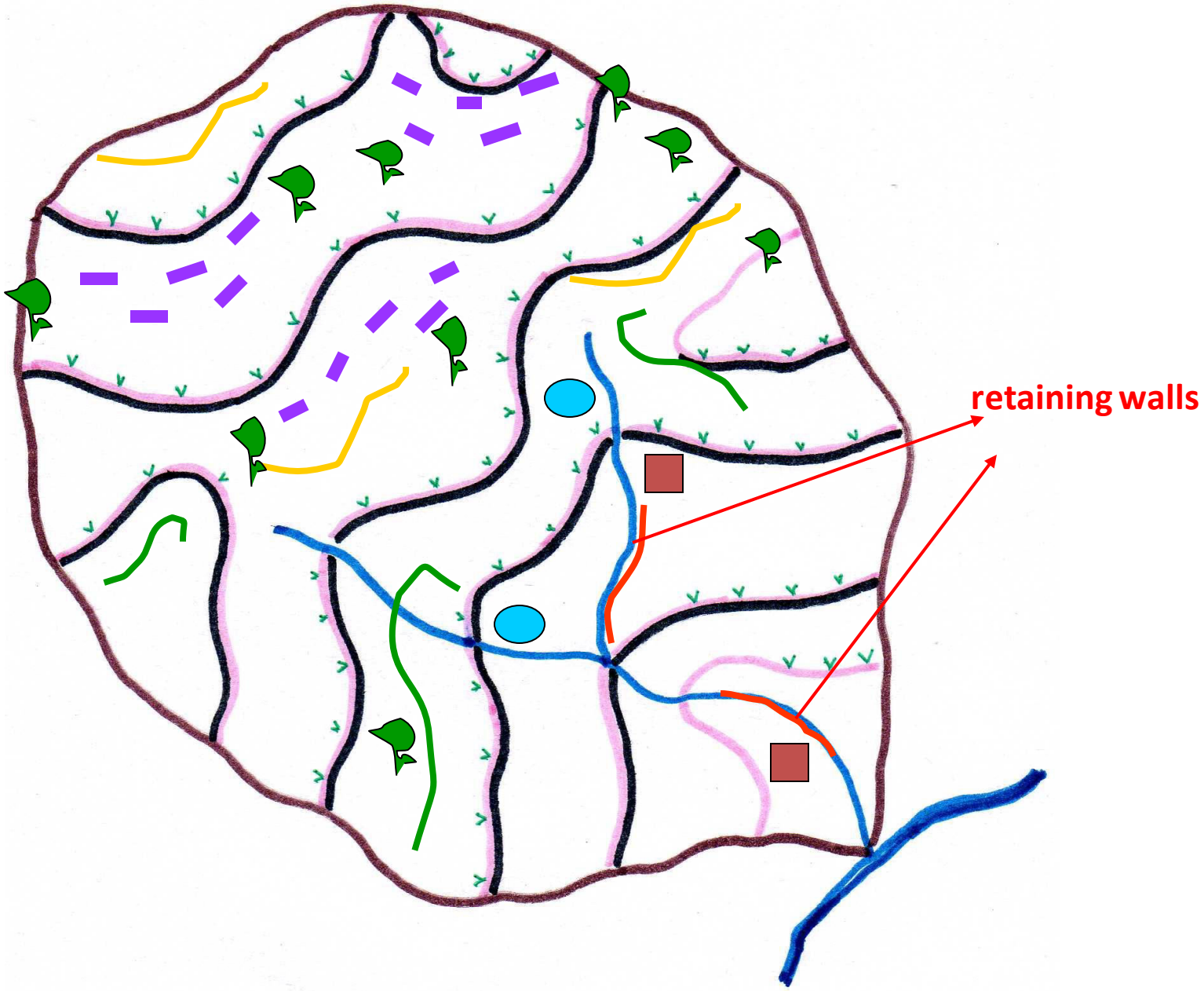

contour trench

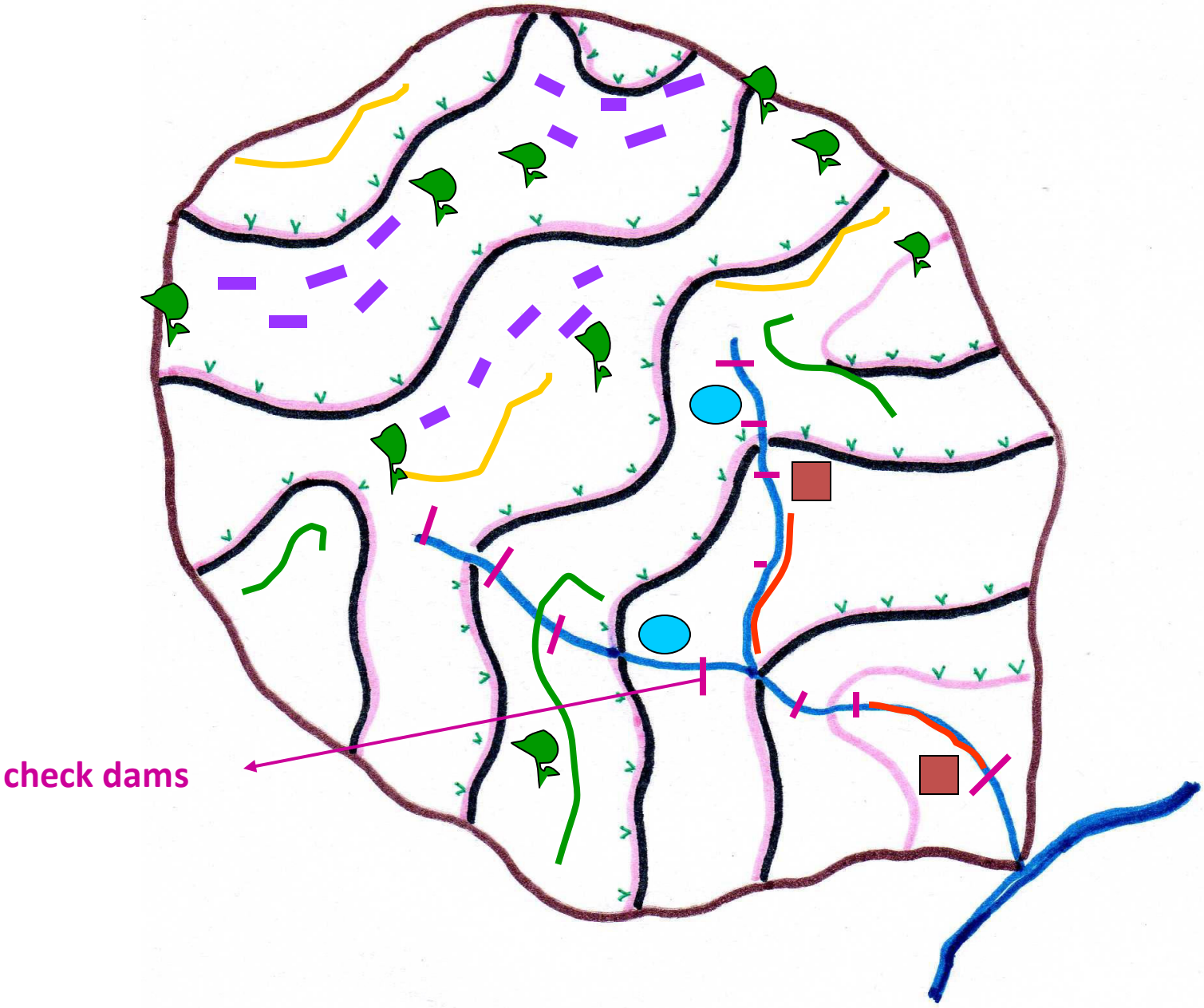

live fence


ponds


ponds
water harvesting structures


agro-forestry
plants


retaining walls


check dams

Principles Governing NRM Planning

Ridge-to-Valley based treatments

- To reduce the runoff velocity
- To reduce the soil loss
- To increase the time of concentration of fast flowing water
- To increase the stability of downstream structures/treatments
- Most degraded land gets first priority
- Poor land is regenerated in the beginning
- To decentralise soil and water conservation treatments

Principles Governing NRM Planning

Land use based on land capability

- To identify the land capability- erosion, soil depth, soil texture and slope
- To decide the land use based on capability for optimum utilisation of resources
- To determine different treatments to achieve the land use

Principles Governing NRM Planning

Treatments based on contour line

- Water harvested in treated area remains at uniform level leading to even moisture
- Water pressure at all points is even, helps in prevention of damage of treatment
- It helps in land levelling

Principles Governing NRM Planning

CBOs : As the prime stake holders

- Plan, implement, monitor and sustain the watershed activities
- Represented by different stakeholder groups/micro watersheds
- Helps in ensuring ownership

MGNRGES: NRM FOCUS (FY 2017-18)

- Need for paradigm shift from Relief Works approach to Integrated Natural Resource Management (INRM) on **Ridge to Valley** principle
- Planned & systematic development of land & harnessing of rainwater following watershed principles

MGNRGES: NRM FOCUS (FY 2017-18)

- Total quality management of natural resources
- Logically sequenced and packaged together (Community & Individuals)
- Systematic identification & implementation of projects

Districts As a Synergising Unit for Convergence Planning

Role of District Collector

- **MGNREGS-** The Labour Budget (Annual Action Plan of MGNREGS) is to be coordinated by the District Programme Coordinator (DPC)
- **IWMP-**Chairman of the District Planning Committee approves the Perspective & Annual Action Plan relating to watershed projects (IWMP)
- **PMKSY-**District Level Implementation Committee (DLIC) expected to prepare the District Irrigation Plan (DIP) showing contribution of various funding schemes and programmes towards specific outputs and outcomes

Districts As a Synergising Unit for Convergence Planning

- Coordinating the Annual Action Plans relating to MGNREGS, IWMP & PMKSY – with the convergence of the ongoing schemes
- A comprehensive project of village/watershed/command area incorporating /integrating all the works/activities required for the integrated development of the village/watershed/CAD approach is prepared and incorporated in the DIP

The DPC/Collector will ensure that the Natural Resource Management component of Labour Budget of MGNREGS is essentially made part of the District Irrigation Plan (DIP)

Technical Support

- Technical institutions- IITs, NIITs, Agriculture Universities, State Technical Institutions
- Professionals (as a part of Corporate Social Responsibility)
- Universities could work in watersheds as a part of the 'Unnat Bharat Abhiyan'
- Technical inputs, while planning will be drawn from the joint pool of technical personnel of IWMP in Watershed Cell cum Data Centre, MGNREGA Unit and the Agriculture Department.
- DFID for Climate Resilient Interventions (Bihar, Odisha & Chhattisgarh)

Central Ground Water Board

Consultation with regional offices of CGWB

- Decisions with the aquifer maps made available for finalizing the location of the proposed water bodies
- Details of design of structures required for ground water recharge specific to regions, under planning consideration
- Possible scope of services from Regional Offices, CGWB in preparation of a scientific plan for NRM works

National Remote Sensing Centre (NRSC),ISRO

- The geoportal of NRSC, 'Bhuvan' has complete solution for planning for NRM based on watershed principle
- The mobile apps of NRSC will be customised to plan for NRM related MGNREGA works, which will be geotagged and tracked from planning to execution , as part of a watershed/DIP
- The NREGASoft shall be customised, accordingly, so that duplications and stand alone works are avoided

Community Based Participatory Planning

- Creation of sustainable livelihoods is one of the desired outputs
- Self Help Groups under NRLM will be closely involved in the planning & implementation of watershed project under MGNREGS
- Involvement of CBOs from planning stage

Process of Ratification by the GPs for Shelf of Projects

- Evidence based scientific planning process
- Formation of **Community Based Organisations**
- MGNREGS will have to evolve systems of planning and implementing across more than one Gram Panchayat
- Cluster Facilitation Teams of the MGNREGS in water stressed regions and Intensive Block clusters of NRLM should be actively involved in this process

MGNREGA
Without Convergence with IWMP

- Watershed Management works will be taken up only after a comprehensive assessment of the entire watershed in the GP and shall address all issues of soil erosion, rainwater retention and afforestation
- Stand alone works in the above category without a comprehensive watershed plan shall not be permitted.
- Efforts to complete structures in one working season will be made
- Outcomes must be time bound for the approach to be successful

MGNREGA
Without Convergence with IWMP…

- Comprehensive watershed plan shall be prepared on 'Ridge to Valley 'principle
- Engineers /Technical Assistants and Mates of MGNREGS at Block and GP level would be trained and supported by the State Level Nodal Agency (SLNA) of IWMP and technical personnel of WCDC

Watershed works will preferably be taken up in cluster approach

MGNREGA
With Convergence with IWMP

Areas where IWMP is already under implementation

- Ensuring material intensive works are taken up under IWMP, and all the other labour intensive NRM works shall be done only under MGNREGS
- It shall be the responsibility of the Programme Officers of MGNREGS & IWMP to ensure this convergence and follow all non-negotiables and process of MGNREGA
- NRM category works can be included in the shelf of projects under MGNREGA, where Detail Project Reports (DPRs) prepared under IWMP

MGNREGA
With Convergence with IWMP.....

- WDT will prepare the technical estimates, provide technical support to the Technical Assistants/JEs of MGNREGA and do the final check measurement cum evaluation of outcomes as per the process
- It is advisable to straightway take up watersheds in which 1 and half years of IWMP preparatory work has been completed
- If necessary, IWMP DPR may be revisited

MGNREGA
With Convergence with IWMP….

New IWMP Projects

- IWMP Projects, where DPRs will be prepared, the NRM activities to be taken up through convergence with MGNREGA need to be included and clearly indicated in the DPR in consultation with concern officials of MGNREGS, Watershed Committees and Gram Sabha
- The technical resources of watershed areas should be moved in these areas to prepare the DPRs
- CSRs can be encouraged to provide technical resources for these areas

Construction of Wells in Over Exploited and Critical Blocks

- Extraction of groundwater through individual sources such as wells and tube wells can sometimes threaten the quantity (depth) and quality of the resource
- **Bore wells and tube wells will NOT be considered a permissible activity under MGNREGA under any circumstances**
- Digging of private well not be a permissible activity under MGNREGA in **over exploited or critical or semi critical areas**
- In areas classified as **'safe'** by the CGWB, individual wells may be considered

Construction of Wells in Over Exploited and Critical Blocks

- In **over exploited or critical or semi critical areas**, only **'group wells'** will be allowed where a group of farmers agrees to share the water from such a 'group well'
- Each group will comprise of at least 3 farmers and there should be a formal agreement between them for water sharing
- Only one member from a family can be the member of the group (he /she cannot be member of more than one group)
- Verification of the agreement within this group will be carried out through the GP and registered as a Group Irrigation Well in revenue records

Prioritizing CAD & WM

- Major challenge facing surface irrigation systems is the growing gap between irrigation capacity created and irrigation capacity utilised
- The works permissible under MGNREGA will entail one time rehabilitation of minors, sub-minors and field channels, including desilting, repair of minor cracks, earth levelling, repair of earthen embankments, bank raising and resurfacing canal base with clay
- Regular O&M will not be a permissible activity under MGNREGA
- As per Minor Irrigation Census, there are **80128 water bodies (Total culturable Command Area-15,23,166 ha) in 363 districts from 24 states**, which are not in use

MGNREGS: Works on NRM

Financial Year	Number of NRM works		Expenditure on All works (in Lakhs)	Expenditure on NRM works (In. Lakhs)	%age of expenditure on NRM works
	Ongoing	Completed			
2015-16	4148607	1683107	4162468	2422980.4	**58.2**
2016-17	4027885	1765808	3520872.2	2177107.7	**61.8**
2017-18	4274686	2171641	5896534.22	3227554.59	**54.74**
2018-19 (Till Date)	4242134	684508	1714885.48	1110514.41	**64.76**

MGNREGS: Farm Ponds

Financial Year	Target	Number of Farm Ponds		%age of Completed Farm Ponds
		Ongoing	Completed	
2016-17	882325	601333	273720	31.02%
2017-18	413766	200953	212813	51.43
2018-19 (Till Date)	581231	466830	114401	19.68

State Initiatives in NRM

- ‘Mukhyamantri Jal Swavalamban Abhiyan’ in Rajasthan
- ‘Dobha’or Farm Ponds construction in Jharkhand
- ‘Mission Kakatiya’ in Telangana
- ‘Neeru Chettu’ in Andhra Pradesh
- ‘Kapil Dhara’ in Madhya Pradesh
- ‘Bore Well Recharge’ in Karnataka
- ‘Jalyukt Shivar’ in Maharashtra

‘Mukhyamantri Jal Swavlamban Abhiyan’ in Rajasthan





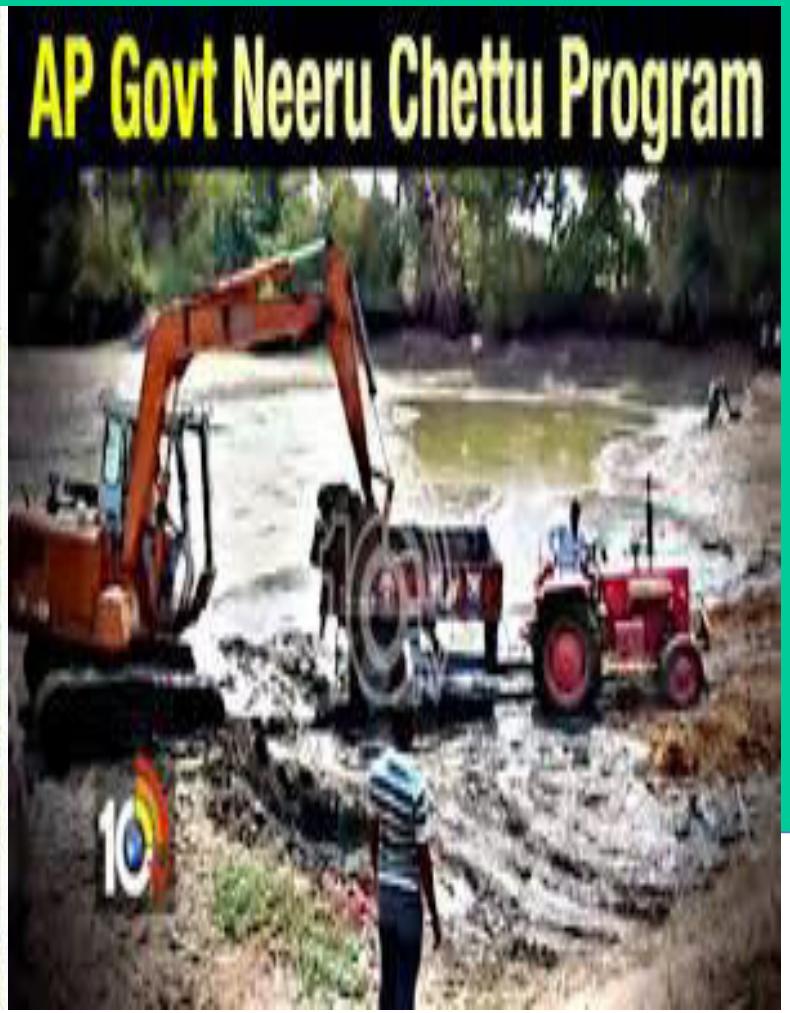

‘Dobha’ construction in Jharkhand






‘Mission Kakatiya’ in Telangana

‘Neeru Chettu’ in Andhra Pradesh



‘Kapil Dhara’ in Madhya Pradesh






‘Bore Well Recharge’ in Karnataka






‘Jalyukt Shivar’in Maharashtra

THANK YOU