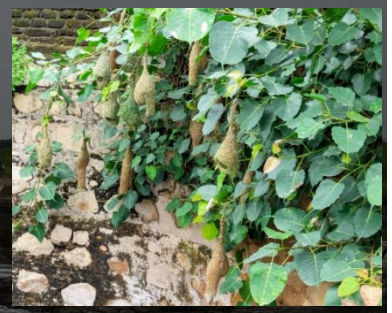
ADAPTATION FUND

SIWI WORLD WATER WEEK @ HOME | Official Session

Development Alternatives

World Water Week (WWWeek) At Home 24 – 28 August 2020









Need for innovation for climate adaptation in the water sector- CSO Perspective

Insights from India and Ecuador

Ms. Gitika Goswami

Senior Programme Director. Development Alternatives Group,

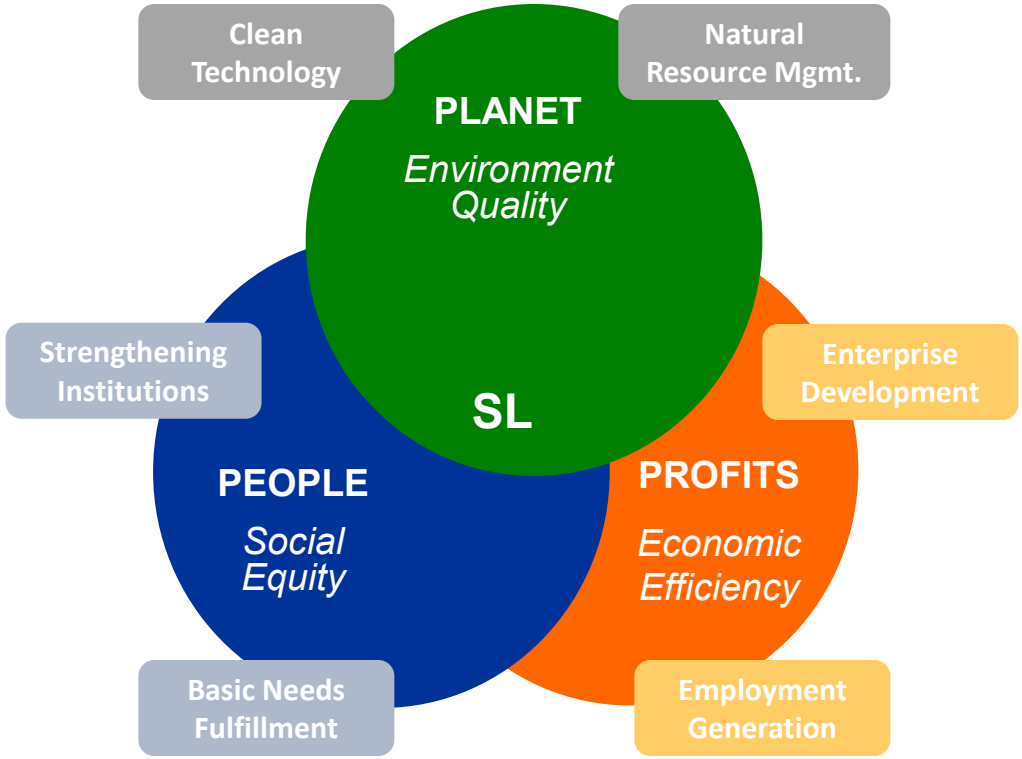
Representative from Adaptation Fund NGO Network

25th August, 2020

Content

- Brief about Development Alternatives Group and Adaptation Fund NGO Network
- Why we need innovation in Climate Change Adaptation
- What are some of the innovations in water sectors- agriculture & fisheries Sector- Some Case examples from India & Ecuador
- What role can the Adaptation Fund play in addressing those needs in the water sector specifically?
- What will be the role of the civil society in supporting innovation

Development Alternatives Group



Vision

- A world where every citizen can live a secure, healthy, and fulfilling life in harmony with nature.

Mission

- To create models that generates sustainable livelihoods in large numbers

Guiding Principles

- Putting the Last First : *Fairness*
- Polluter Pays : *Responsibility*
- Participation : *Inclusion*
- Plan Systemically : *Holistic*
- Precaution : *Minimize Risk*

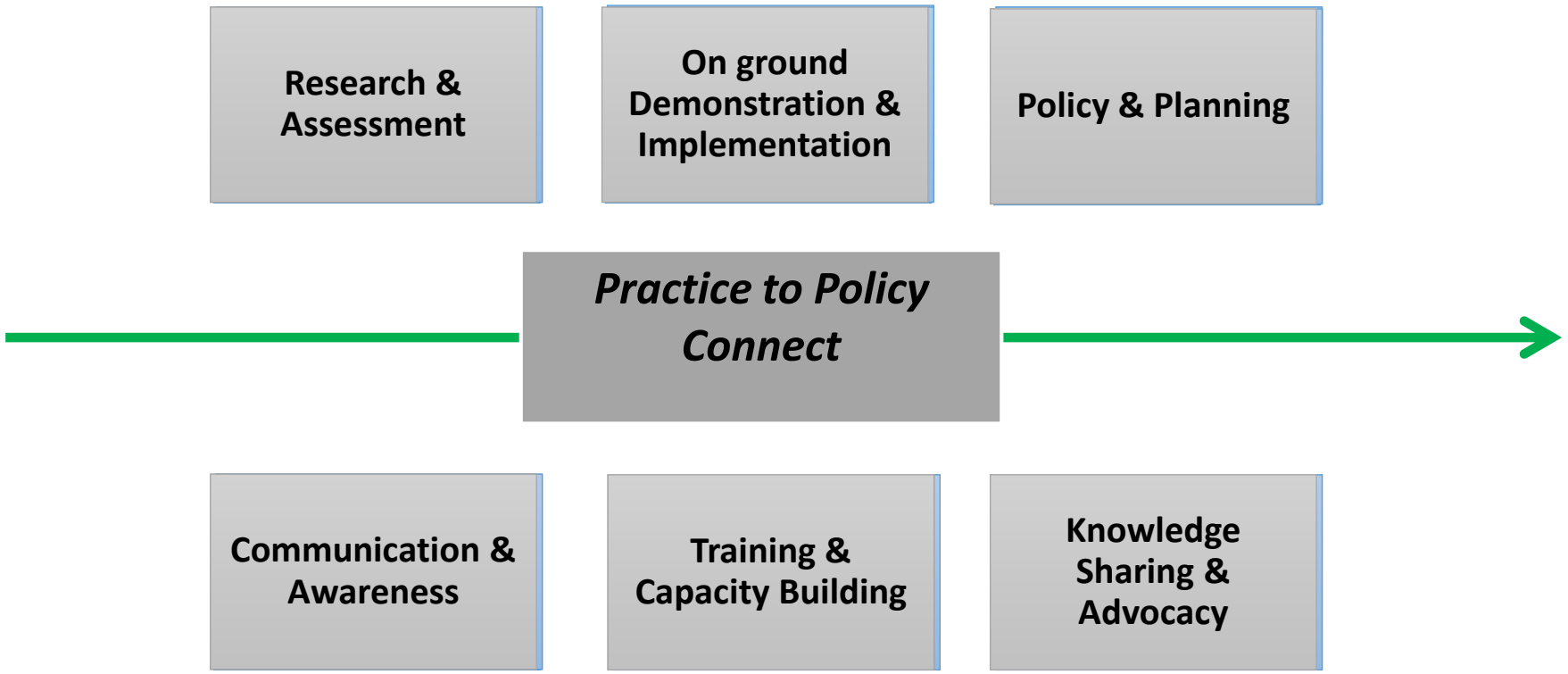
Sustainable livelihoods (SL) *implies…*

… informed and empowered communities **(people)**

……with access to dignified and viable income generation opportunities **(profit)**

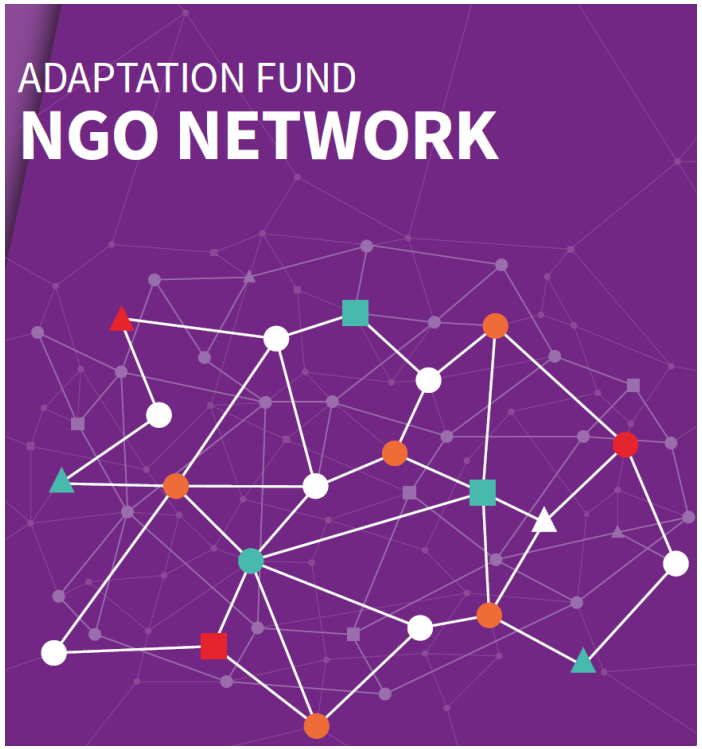
……and living in a clean and healthy environment **(planet)**

Development Alternatives Approach: Practice to Policy



The Adaptation Fund NGO Network

ADAPTATION FUND
NGO NETWORK



We are a **global coalition of more than 250 associate CSOs** focussing on the Adaptation Fund. Our aim is to **support the most vulnerable** to climate change and ensure they benefit from the Adaptation Fund.

To achieve this we work to make the Fund more transparent and participative promoting the effective engagement of civil society and ownership of local stakeholders.

This is why we **monitor the implementation** of the Adaptation Fund's projects; we **draft policy recommendations** for the Fund's Board; and we provide **independent on-the-ground insights** on the Fund's activities in your country.



Sylviane Bilgischer

Belgium, Chair of the Adaptation Fund Board, 2019

"At every Adaptation Fund Board meeting, we exchange with civil society through the 'CSO-Dialogue' organised by the AF NGO Network. This constitutes a bottom-up flow of information from the field avoiding that discussions are disconnected from what happens on the ground. I find these exchanges particularly interesting and look forward to more such dialogues in the future."

www.af-network.org

Join the AF NGO Network and become an associate CSO!

www.af-network.org
@af_ngo_network

Why we need innovation in Climate Change Adaptation

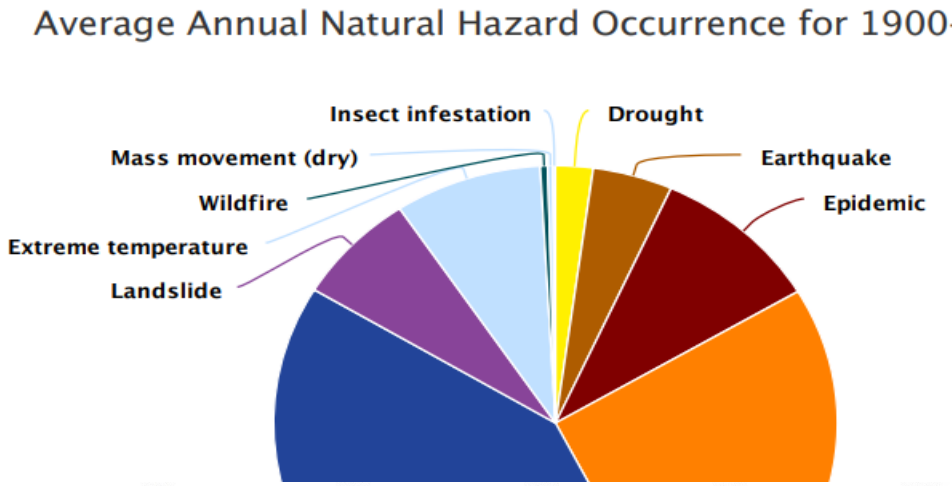
- Technological innovation in Climate change adaptation is relatively less in number than climate change mitigation globally
- A number of traditional innovation in climate change adaptation has been observed in countries in global south at pilot scale but the patented technological innovation in adaptation is very limited and also concentrated in few countries like China, Germany, Japan, the Republic of Korea, and the United States, mainly large scale innovation
- Innovation in Climate Change Adaptation mostly happen by using traditional knowledge and practices backed by scientific data

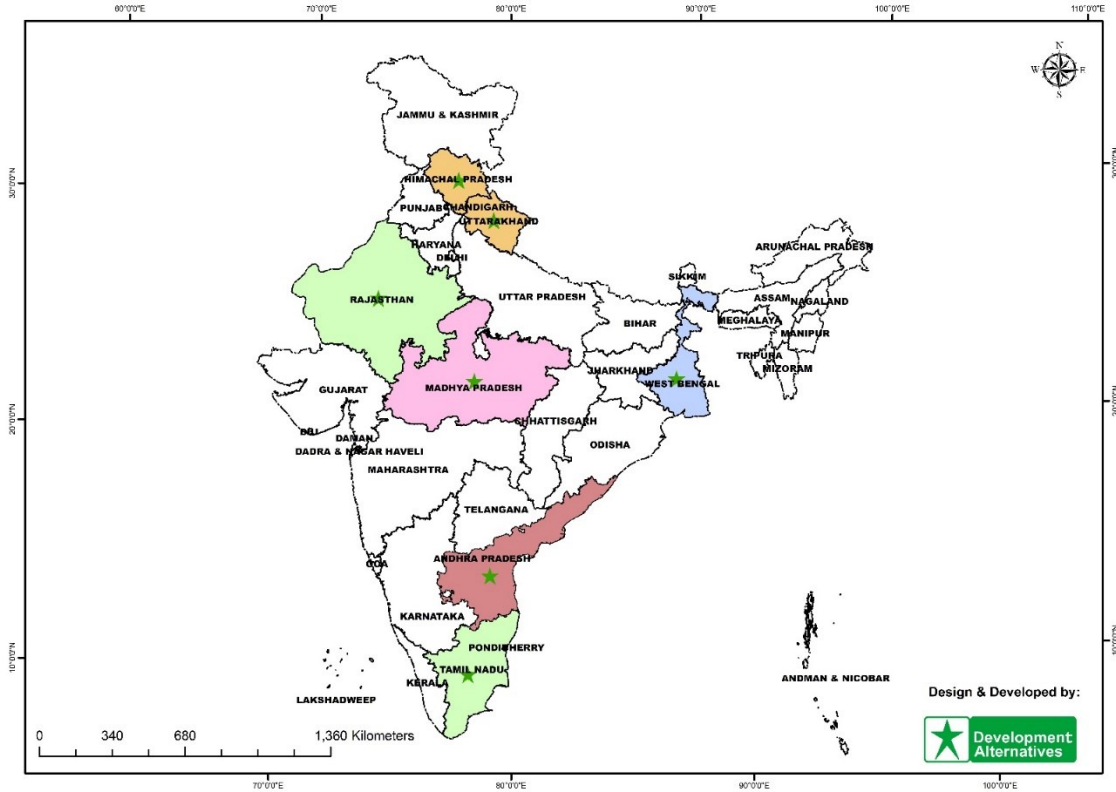
Development Alternatives

ADAPTATION FUND NGO NETWORK

Overview of Climate vulnerabilities in India

- India is the seventh largest country in the world, home to 1.3 billion people and contains diverse ecosystems and cultures from Himalayas to down South
- Around 47% of the population of India is dependent on agriculture as their main livelihood, though its contribution to GDP is declining, constituting 15% in 2016.
- India faces some of the highest disaster risk levels in the world, ranked 29 out of 191 countries
- India has very high exposure to flooding, including, riverine, flash, and coastal, as well as high exposure to tropical cyclones and their associated hazards and drought
- Climate change is a major challenge for India, threatening to enhance risks already elevated by high levels of **social vulnerability** and **climate variability**





Issues & Challenges in Climate Change Adaptation- India

Climatic Vulnerabilities

- Recurring drought
- Erratic rainfall: delay in Monsoon rain, heavy rainfall in some days causing soil erosion, partial droughts
- Frequent unseasonal fog & loss of crop yield
- Repeated cyclones & destruction of Mangroves forests in coastal areas
- Salt water intrusion affecting agriculture, aqua culture, fresh water sources and human habitation
- Loss of biodiversity due to overfishing/environmental pollution

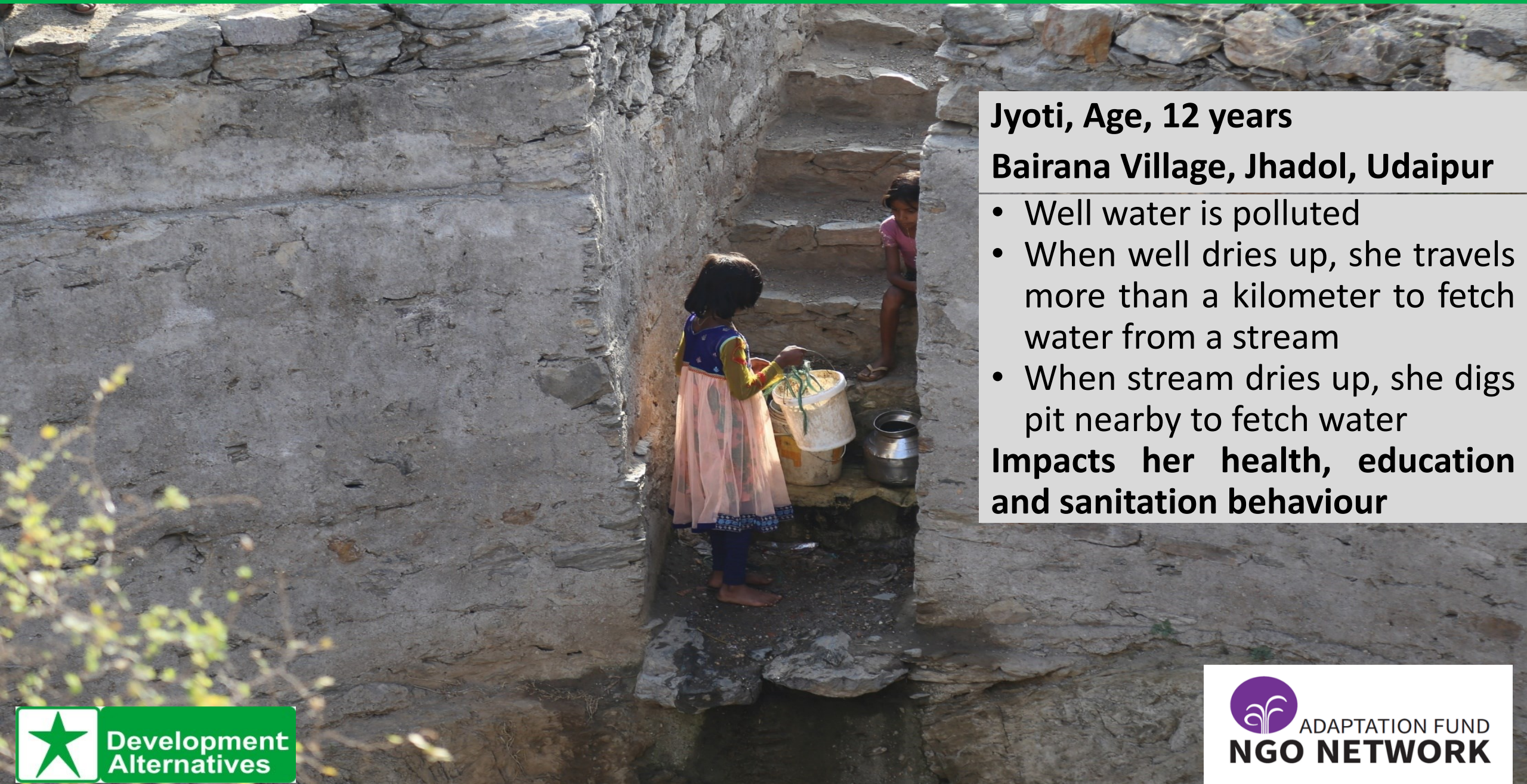
Socio- Economic Vulnerabilities

- Food, fodder, fuel insecurity
- Water scarcity across country
- Massive deforestation
- Dependence on money lenders
- Lack of proper knowledge and adoption of inappropriate techniques/practices of soil & water management and ecological agriculture
- Lack of alternative sources of income and regular migration in search of livelihoods

Development Alternatives

ADAPTATION FUND NGO NETWORK

Climate Vulnerability Contd.



Jyoti, Age, 12 years

Bairana Village, Jhadol, Udaipur

- Well water is polluted
- When well dries up, she travels more than a kilometer to fetch water from a stream
- When stream dries up, she digs pit nearby to fetch water

Impacts her health, education and sanitation behaviour

Development Alternatives

ADAPTATION FUND NGO NETWORK

Learning from the Ground Contd.



Salt water intrusion in ponds affecting aqua culture, fresh water sources and human habitation

Development Alternatives

ADAPTATION FUND NGO NETWORK

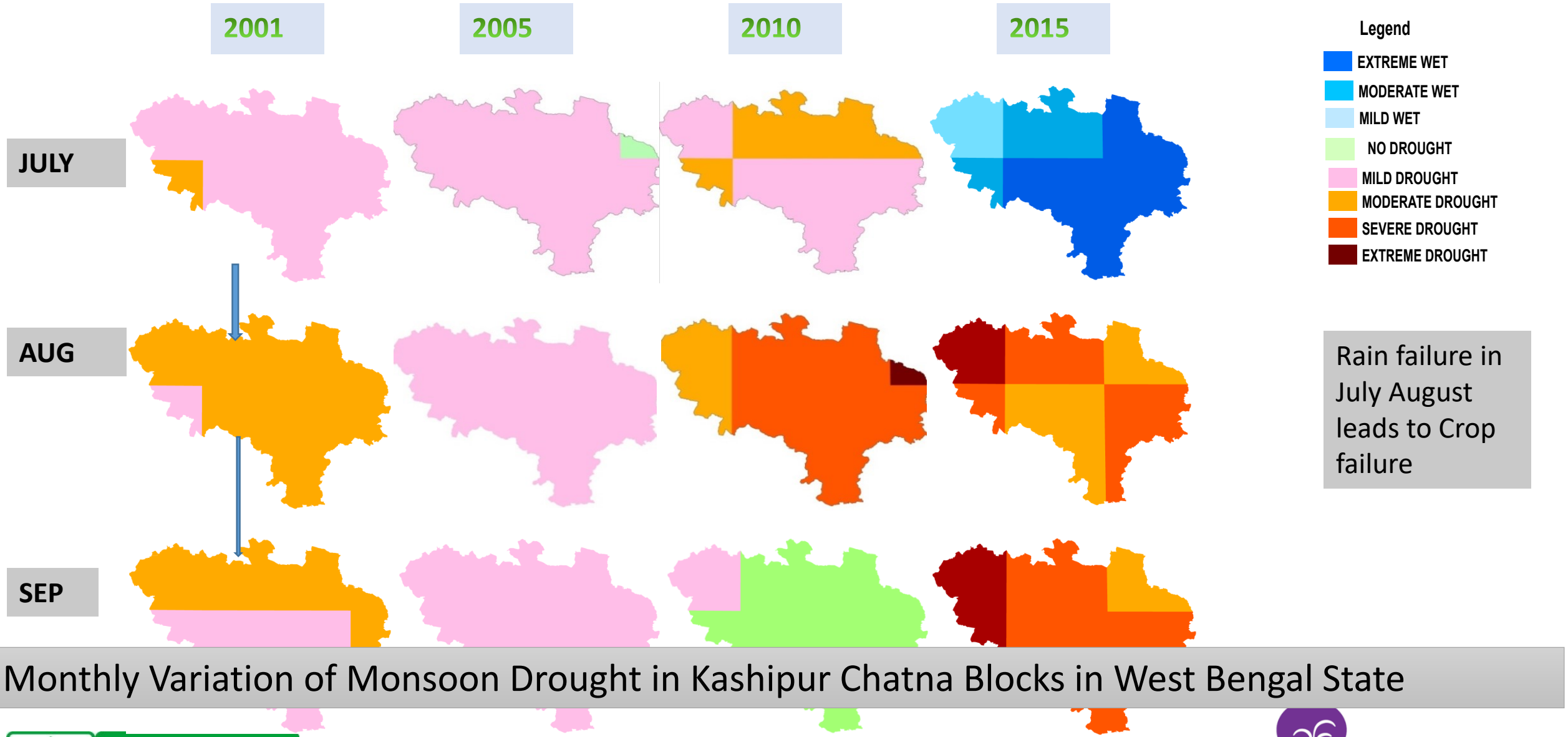
Learning from the Ground Contd.



Ganga Bai, Age, 53 years
Baldevpura Village, Atru, Baran

- ‘‘A lot of rain happens at once erratically, rain water ……mixes with clean water in the our water source”
- “The summers are hotter than before and winter are shorter”
- “We use cloth to filter water”
- “We defecate in the open in summer, because priority for using it for sanitation is low. Rather……. drinking, cooking, bathing, etc.”

Climate Vulnerabilities- mapping



Rain failure in July August leads to Crop failure

Monthly Variation of Monsoon Drought in Kashipur Chatna Blocks in West Bengal State

Development Alternatives

ADAPTATION FUND NGO NETWORK

Case Examples of Innovation in water sectors in India

Innovation in water use efficiency & enhance the Ecosystem Services



Watershed Management



Sustainable Agriculture



Climate Adaptive Planning

Food & Livelihood Security



Forest Management

Biodiversity Conservation

Lessons from the field

Participatory Land use/Land cover mapping : know your land and water







Villagers observe recurrent droughts are major hazard which affects food & livelihood security

Learning and developing Science from peoples Knowledge

Building Water Harvesting Structures for agriculture use





Different water conservation structures made using traditional and scientific knowledge





Adaptation benefits through the intervention





- **Availability of food, fodder, fuel increased**
- **Nutritional status** of family **improved** through **diversification of food basket**
- **Income of farmer families increased**
- **migration reduced**

Development Alternatives

ADAPTATION FUND NGO NETWORK

Case study: Nature Based Solutions on ground

Participatory watershed management: An integrated solution for improving the livelihood of vulnerable populations and regenerating the natural resource base.

Location- Datia watershed region covering 5,527 ha in the Datia Tehsil of Madhya Pradesh. The Datia district of Madhya Pradesh state of India comes under the Gangetic drainage system and is drained by the Sindh, Pahuj, the Mahuar and the Betwa.

EE ER

EbA

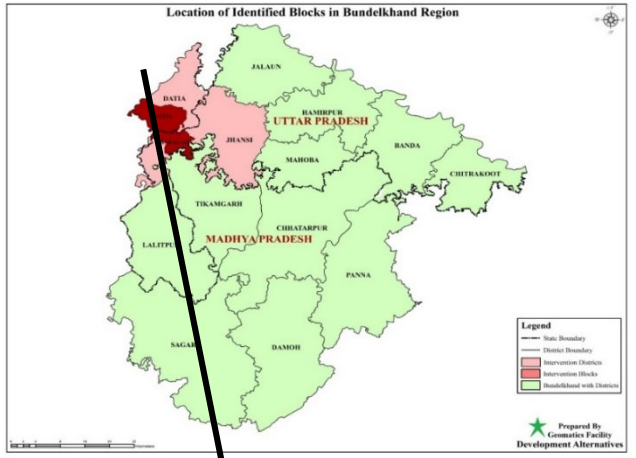
GI

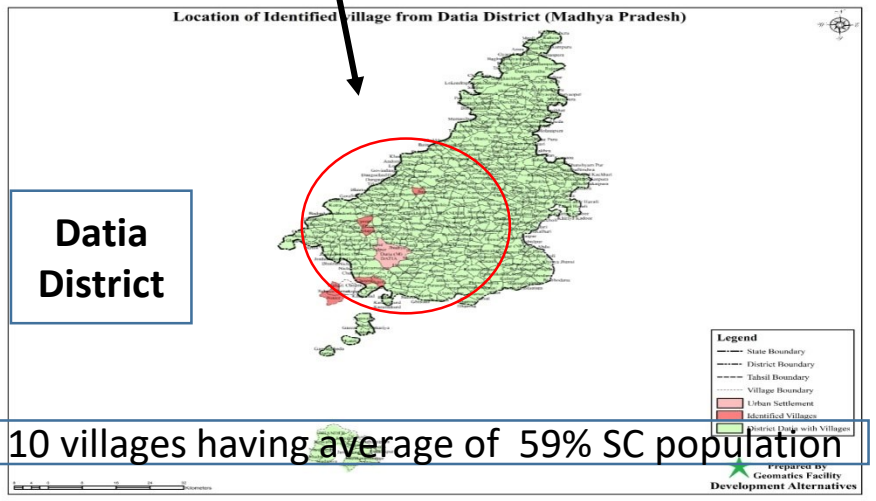
EbMgt

AbC

Societal problems

- Though there are seasonal rivers, but there is heavy runoff during the peak monsoon period. Water becomes available only during few channels of the main stream.
- Water scarcity for fulfilling basic needs
- Long dry spells affecting agriculture and other allied activities
- Low groundwater infiltration
- Migration to nearby cities





Datia District

10 villages having average of 59% SC population

Development Alternatives

Case study: Nature Based solutions on ground

Food security

- **10 villages** (micro-watersheds) in Datia district identified , this has helped to create a water harvesting potential of **71,000 cubic meters** of rainwater for irrigation purposes thus enhancing the agriculture production potential of the region.
- Approx. **100 ha of nonproductive land in** 4 villages brought under productive use **through fodder cultivation and vegetable cultivation.**
- Enhancement in the **cropping intensity and introduction of new crops to the cropping system** such as **gram and Mustard** during Rabi season and **sesame and groundnut** during Khariff season.

Income

- Improved water for agriculture, leading to **about 30 percent enhancement in the average income** of farming households near the watershed
- New models of diversified farming practices adopted by the farmers such as **agri-horti**, **horti pasture** and **vegetable cultivation** in scientific manner.
- **5 individual entrepreneurs** supported for farm based business such as **vermicomposting**, **animal feed**, **floriculture and vegetable push carts**

Water security

- An average increase in ground water level of **0.48 meters were recorded in 78 wells of 7 villages in the watershed** between April 2011- June 2013 (Midterm assessment study)
- Quality of water supply improved in 2 villages through solar based piped drinking water supply to every household with community contribution

Case study: Nature Based solutions on ground

- **More than 60 ha land brought under ToF** and plantation in 200 ha in convergence with the forest departments resulting in enhancement of agrobiodiversity of the region.
- The vegetation covers in the areas have improved which contributed to improvement of the **carbon storage capacity.**

Biodiversity



- Local governance strengthened through community participation in every step. **1200 farmer** members have been mobilised to two FPOs
- The **watershed committee** are empowered to take decisions on the maintenance, distribution and setting norms for equitable use of resources.
- Integration and collaborations at government and national levels, academic and research partnerships developed, thus, facilitating cross learning.

Community institutions and partnerships



- Attracted researchers from India and outside to conduct evaluation studies
- university college cork, Ireland, Environment Planning and coordination organisation (EPCO), government of Madhya Pradesh, National Institute of Disaster Management, Institute of Development studies at the University of Sussex, The kings college, London.

Recreation, education and research

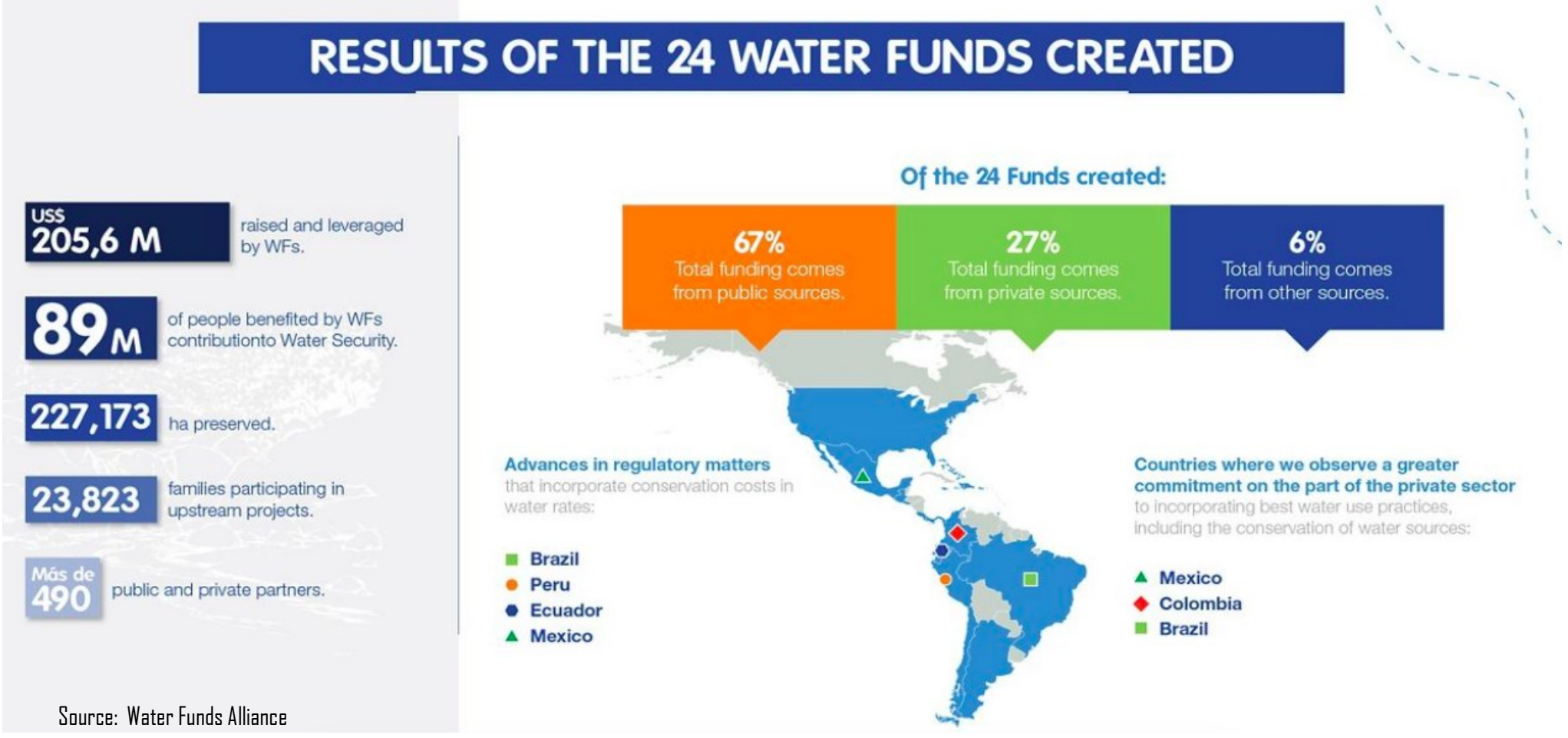


Case Examples of Innovation in Financing in water sectors in Ecuador

Sustainable Financial Mechanisms for Climate Resilience
WATER FUNDS

Water Funds emerge as an alternative to **guarantee the existence of growing financial resources**—in the long term—to **improve the conditions for climate resilience** and to **preserve the quality and quantity of the water resources**.

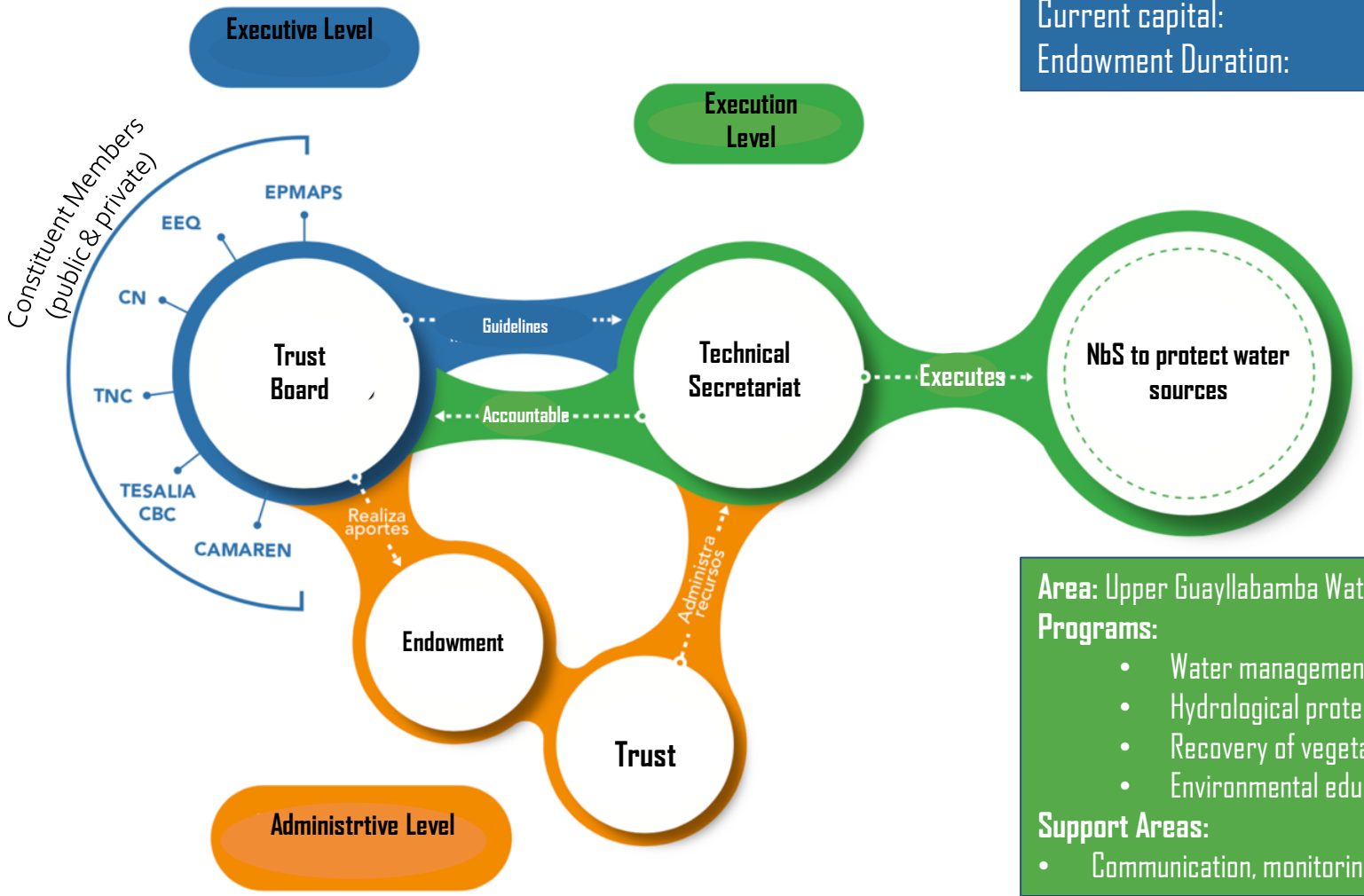
They offer **technical, financial and governance solutions** through the financing of **Nature Based Solutions** for the protection and maintenance of water resources and its ecosystems



Source: Water Funds Alliance

Quito Water Protection Fund

How it works?



Source: FONAG

Year Created:	2000
Initial investment:	US$21,000
Current capital:	US$18M
Endowment Duration:	2080



Area: Upper Guayllabamba Watershed

Programs:

- Water management
- Hydrological protection areas
- Recovery of vegetative cover
- Environmental education

Support Areas:

- Communication, monitoring, science station

Role of Adaptation Fund in addressing the needs

- To scale up the pilot initiatives within countries through NIEs
- The current projects of AF are very small in terms of impact areas but it has made a huge transition on ground- touching the marginalised
- Involves more CSOs in not only execution and monitoring role, but more capacity development and communication and advocacy
- To promote good practices/ successful projects to be replicated in other similar geo-climatic zones across countries/ regions
- Promote best practices of fund mechanism among countries and the funds operational procedure needs to be flexible
- Reduce complexity in the releasing funds to the executing agencies
- Application procedure for the AF projects to be made simpler for easy access of funds by the small NGOs
- Lifting the country cap depending on the population of vulnerable communit

Development Alternatives

ADAPTATION FUND NGO NETWORK

Role of CSOs in addressing the need

- Policy advocacy with the Government and NIEs for taking up more Adaptation projects in the region
- Lobbying for incorporating successful interventions in the other adaptation projects
- Organise exchange programme between CSOs within country and across countries/ regions (Asia- Africa- Latin America)
- Communicate the best practices in all forum
- Capacity Development of the executing organization for better communication
- Lobbying with the state/ Central Government for mainstreaming the adaptation projects
- Region specific know-how and experience into adaptation work
- Bridge the gap between international organisations and government/community

Development Alternatives

ADAPTATION FUND NGO NETWORK



THANK YOU

ggoswami@devalt.org

