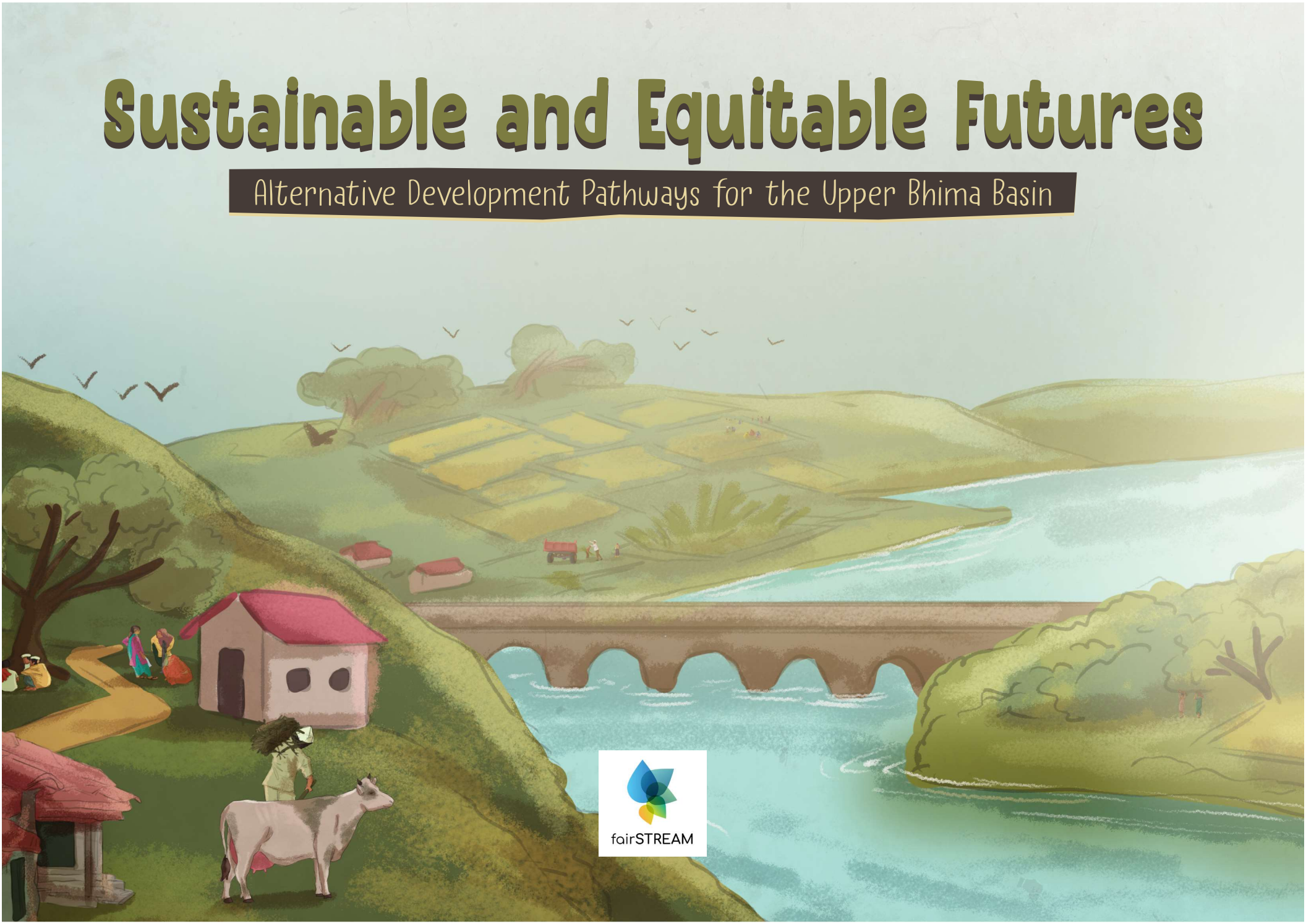
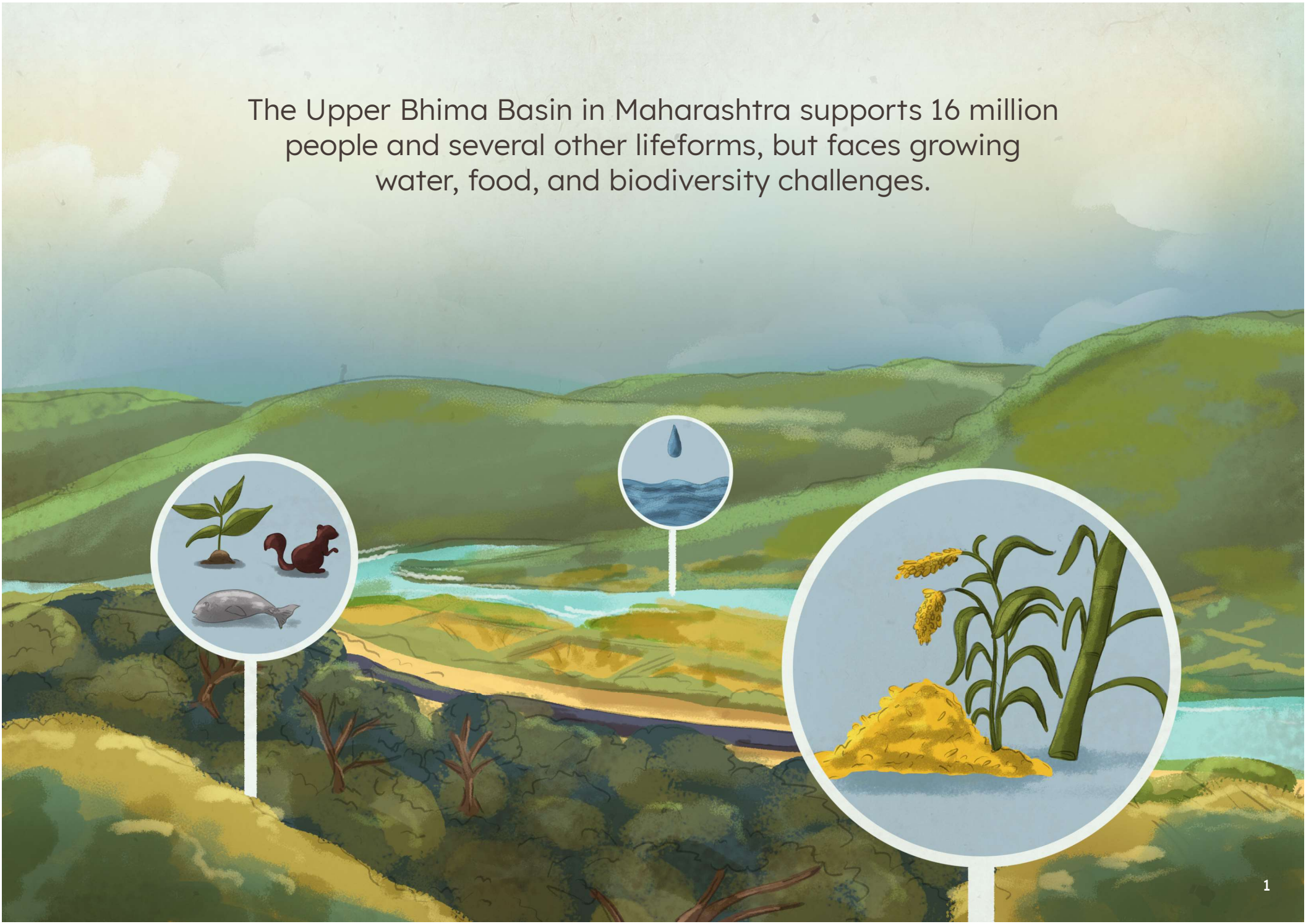
Sustainable and Equitable Futures

Alternative Development Pathways for the Upper Bhima Basin



The Upper Bhima Basin in Maharashtra supports 16 million people and several other lifeforms, but faces growing water, food, and biodiversity challenges.



Water sustainability: The paradigm of unlimited growth and climate impacts are straining water resources.

Rising demand from agriculture, urban domestic users and industry; lacks long-term planning

Groundwater is overused

Rainfall is increasingly erratic due to climate change

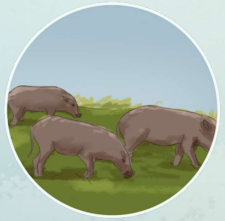
Agricultural Sustainability: Current crop choices and farming practices are unsustainable and harming long-term soil and water health.

Water-intensive crops like sugarcane along with water rights tied to land rights cause inequity in water access; tailend farmer often do not get water

Excessive chemical fertilizer use is degrading soil fertility

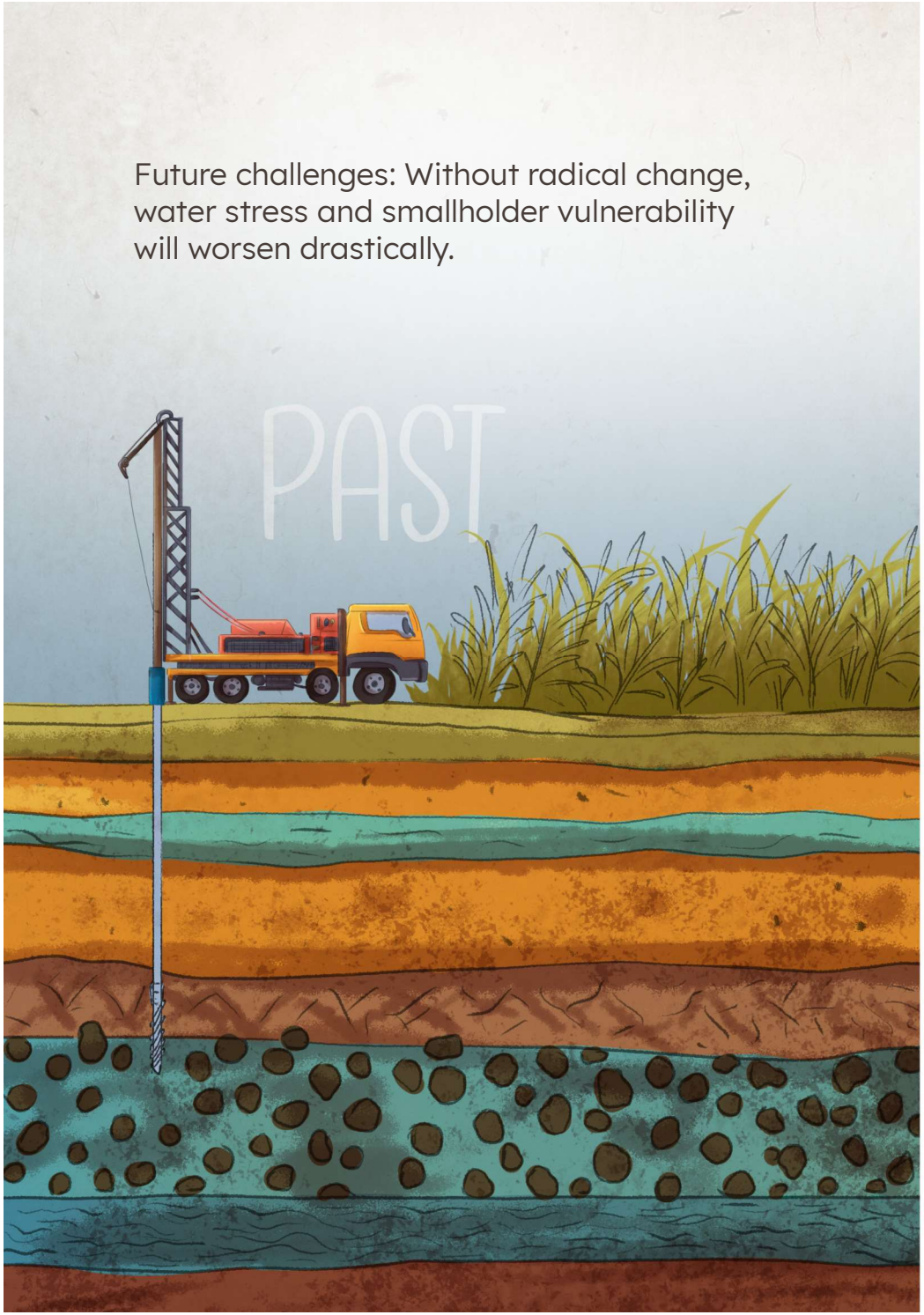
Biodiversity and Livelihoods:
Marginalized communities face resource access issues and rising conflict with wildlife.

Tribal communities struggle for forest rights and fair NTFP/Hirda prices



Human-wildlife conflict disrupts farming adjoining forests

Future challenges: Without radical change, water stress and smallholder vulnerability will worsen drastically.

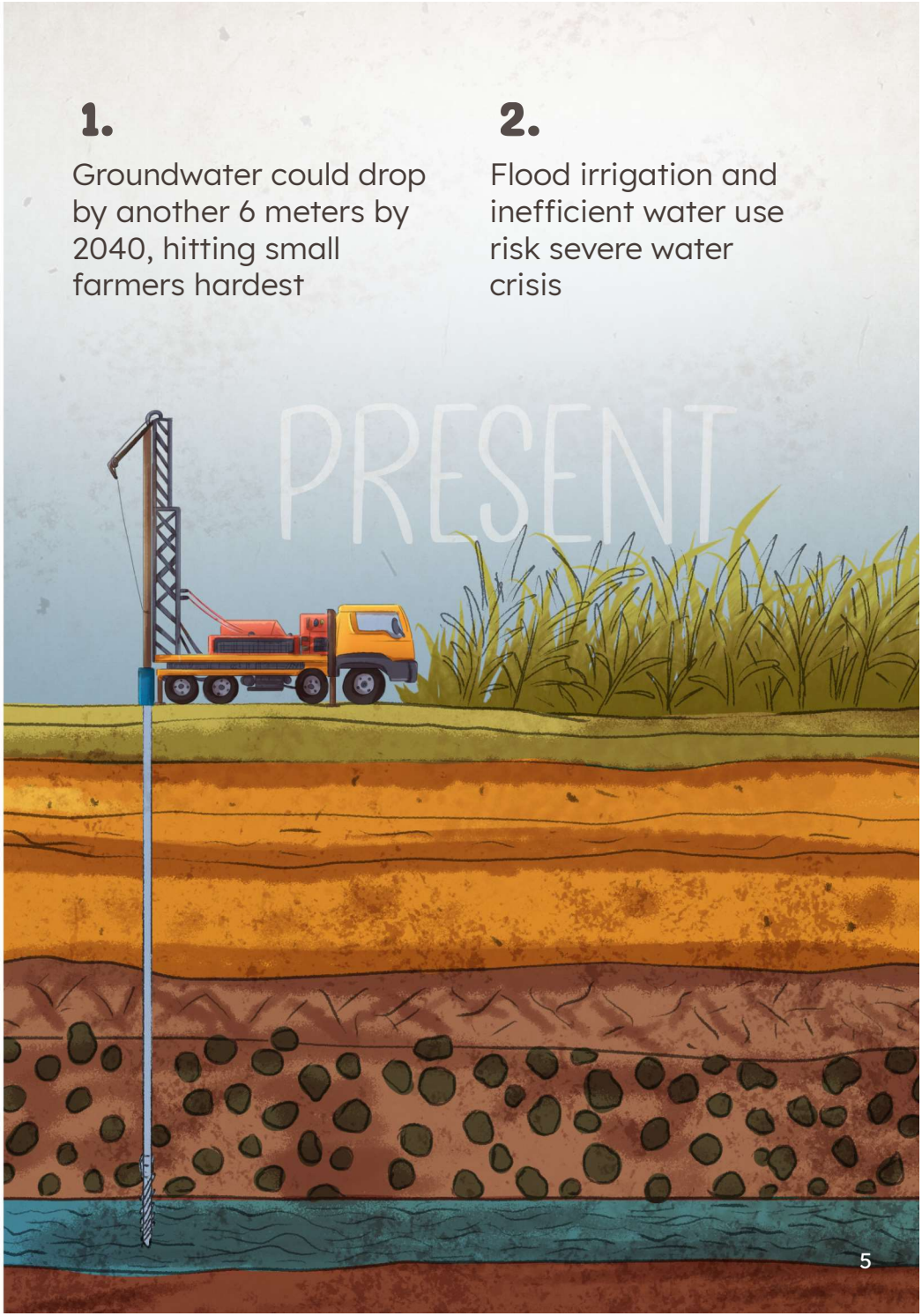


1.

Groundwater could drop by another 6 meters by 2040, hitting small farmers hardest

2.

Flood irrigation and inefficient water use risk severe water crisis

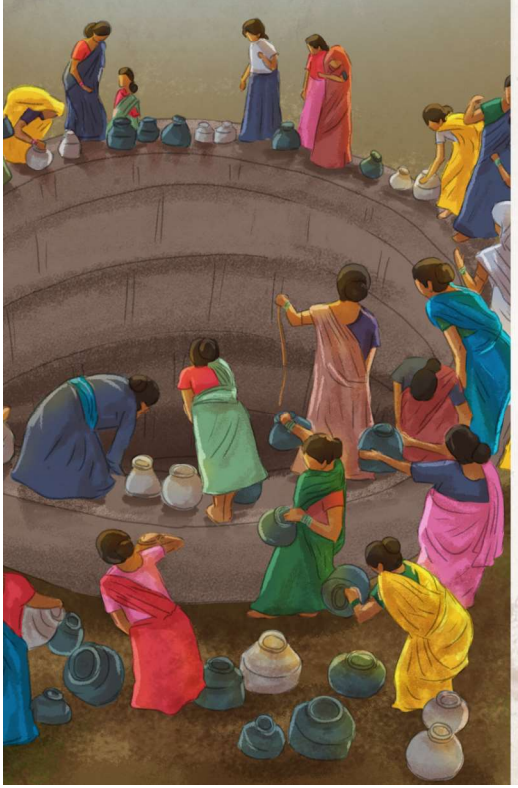


A shift from business-as-usual (BAU) to sustainable and equitable futures is urgently needed.
We envision a fairerwater system and improved farming.

In the BAU scenario: Current trends lead to worsening water scarcity, ecological degradation, and inequality.

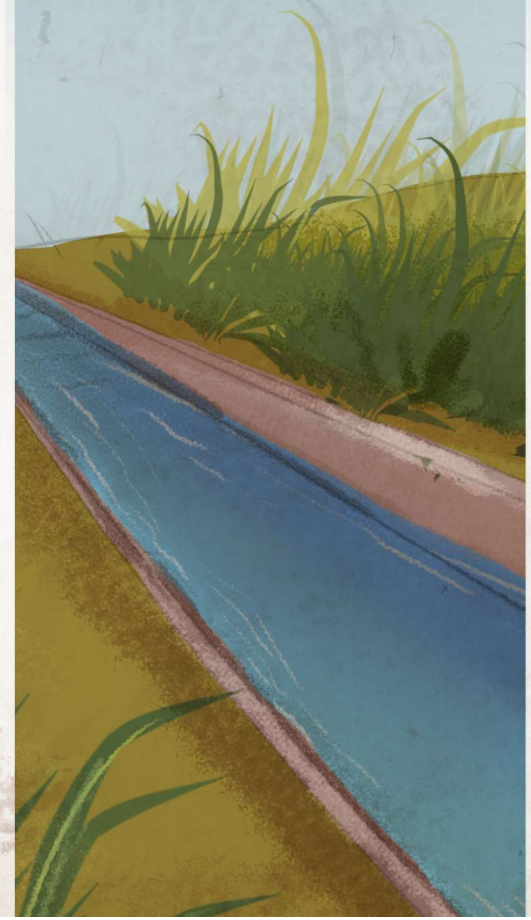
1.

Water scarcity increases with escalating demands and 20% less availability



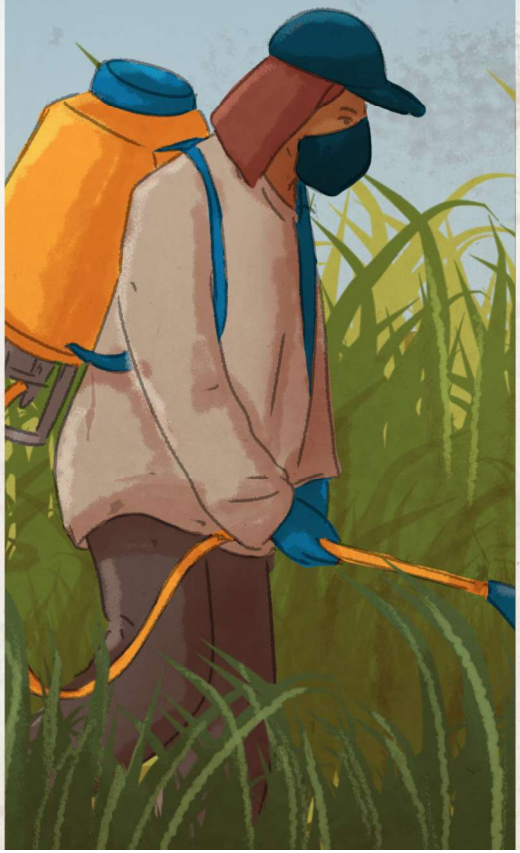
2.

Upstream and tail-end farmers face unreliable irrigation



3.

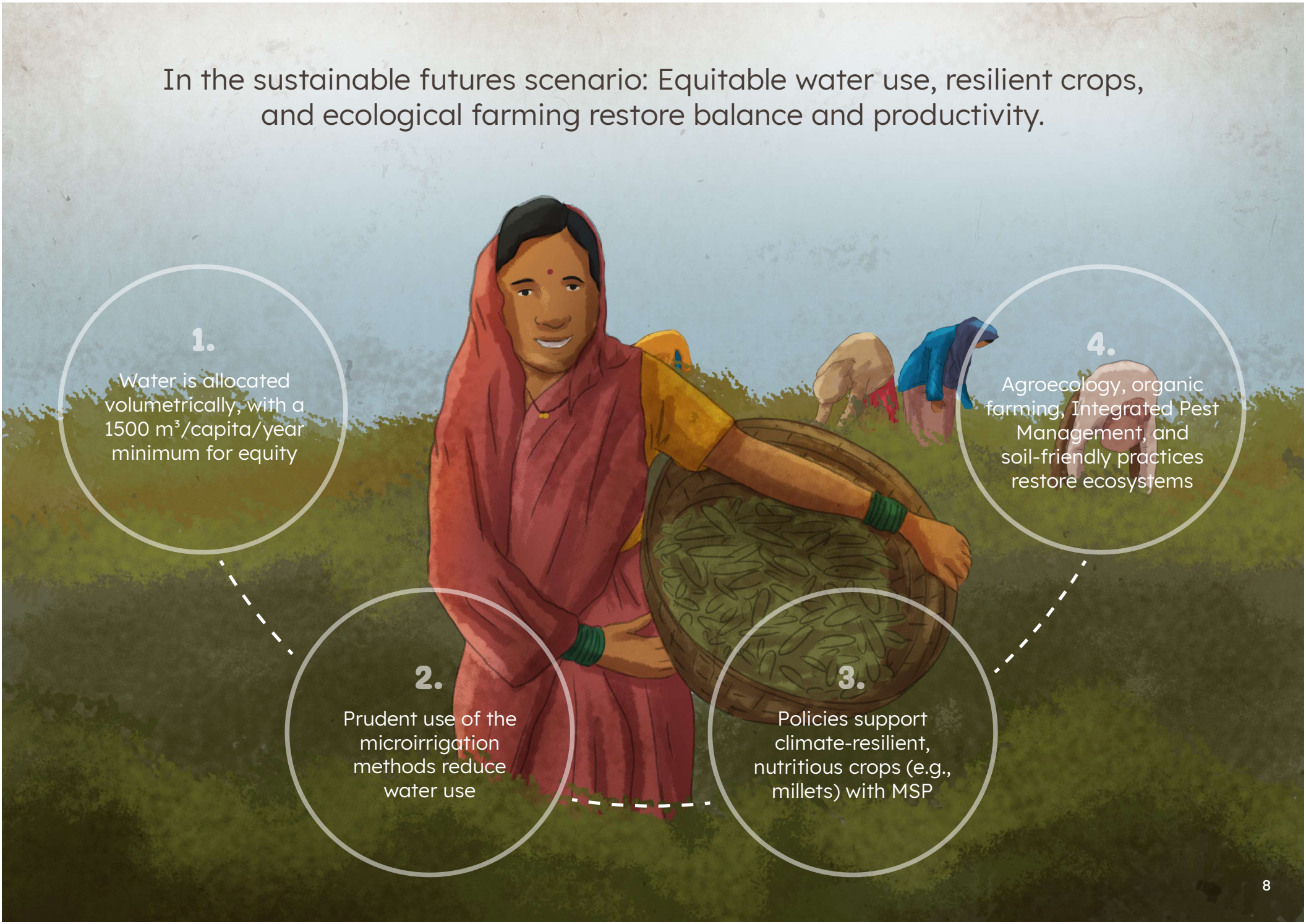
Chemical-intensive farming continues, harming soil and biodiversity



4.

Inefficient irrigation and water-intensive crops degrade soil and water resources

In the sustainable futures scenario: Equitable water use, resilient crops, and ecological farming restore balance and productivity.



Environmental restoration adds to sustainability: Community-led conservation and better resource access enhance biodiversity and livelihoods.

1.
Tribal communities gain forest rights and manage biodiversity-rich areas

2.
Stable Hirda markets via cooperatives reduce income risk

3.
Community-led restoration boosts forest cover and ecosystems

4.
Wildlife corridors, habitat and food-chain restoration, and sustainable land use planning ease farmer-wildlife conflicts

Strong policies, market linkages, and capacity building are essential for transformation.


Urgent policy action is needed, grounded in
both science and local wisdom.

The fairSTREAM project shows a sustainable and equitable future for Upper Bhima is within reach

— if we act now.

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Acknowledgements

This illustrated booklet is the result of a collaborative effort to co-create knowledge around water–food–biodiversity nexus in the Upper Bhima Basin. We thank all the stakeholders who shared valuable insights and helped identify key challenges in the basin and pathways to sustainable and equitable futures for the basin.

Our sincere thanks to Dr. Sharachchandra Lele, Dr. Himanshu Kulkarni, Dr. Aparna Watve, Neema Pathak, Prof. Vijay Paranjpye, Pradeep Purandare, and Dr. Amol Waghmare for their expert guidance in understanding the interconnections across water, agriculture and biodiversity.

We are grateful to the farmers, Adivasi communities, women from self-help groups, and fishers whose lived experiences greatly enriched this work, as well as various organisations active in the study region -- especially Kalpavriksh, Shashwat (Manchar and Junnar), Maharashtra Arogya Mandal, ACWADAM and Kisan Sabha -- for their constant support.

Finally, we thank the International Institute for Applied Systems Analysis (IIASA) for their collaboration and support.

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fairSTREAM

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