Development Alternatives
and
TARA

# CATALOGUE OF PUBLICATIONS

# Agriculture

## Note

Please note that these papers are generally reports of work done on projects the primary purpose of which was to deliver results on the ground and under stringent reporting deadlines.

Although every effort is made by Development Alternatives staff to ensure the accuracy and rigour of their analysis and recommendations, they were intended to be distributed rapidly and while they have received careful editing, many of them have not been formally peer-reviewed to the standards required for academic research.

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# Development Alternatives and TARA

## CATALOGUE OF PUBLICATIONS

# Agriculture

| **Publications** | |
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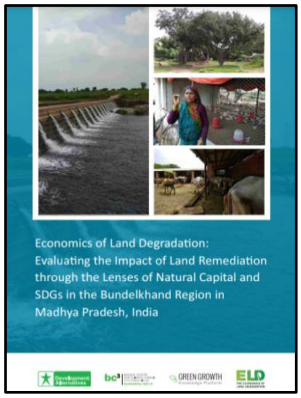
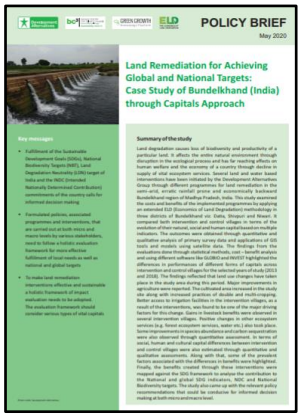
|  | **Title:** Economics of Land Degradation: Evaluating the Impact of Land Remediation through the Lenses of Natural Capital and SDGs in the Bundelkhand Region in Madhya Pradesh, India<br><br>**Year of Publication:** 2020<br><br>**Pages:** 111<br><br>**Keywords:** Biodiversity, Ecosystem, Environment, Economy<br><br>**Abstract:** Land degradation causes loss of biodiversity and productivity of a particular land. It affects the enre natural environment through disruption in the ecological process and has far reaching effects on human welfare and the economy of a country through decline in supply of vital ecosystem services. This study examined the costs and benefits of the implemented programmes by applying an extended ELD (Economics of Land Degradation) methodology in three districts of Bundelkhand viz: Daa, Shivpuri and Niwari. A toolkit for ecosystem valuation using the adopted methodology was developed for possible replication of the study by the research community and for policy decision making. The study also came up with the relevant policy recommendations that could be conducive for informed decision making at both micro and macro level.<br><br>**URL:** https://www.devalt.org/images/L2_ProjectPdfs/ELD_Report_Final.pdf?Oid=301 |
|  | **Title:** Land Remediation for Achieving Global and National Targets: Case Study of Bundelkhand (India) through Capitals Approach<br><br>**Year of Publication:** 2020<br><br>**Pages:** 16<br><br>**Keywords:** Biodiversity, Ecosystem, Environment, Economy<br><br>**Abstract:** Land degradation causes loss of biodiversity and productivity of a particular land. It affects the enre natural environment through disruption in the ecological process and has far reaching effects on human welfare and the economy of a country through decline in supply of vital ecosystem services. This study examined the costs and benefits of the implemented programmes by applying an extended ELD (Economics of Land Degradation) methodology in three districts of Bundelkhand viz: Daa, Shivpuri and Niwari. The study also came up with the relevant policy recommendations that could be conducive for informed decision making at both micro and macro level.<br><br>**URL:** https://bit.ly/38PKII2 |

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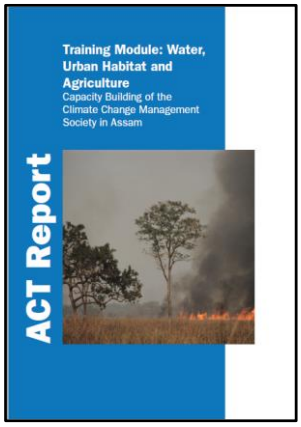
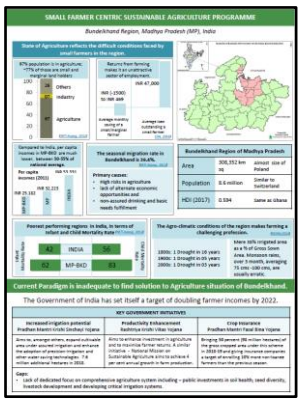
|  | **Title:** ShubhKal - building resilience for a brighter tomorrow<br>**Year of Publication:** 2019<br>**Pages:** 52<br>**Keywords:** Skill development, Livelihood,<br>**Abstract:** In bridging the development deficit in Bundelkhand, the challenges are immense, but the opportunities too, are abundant. DA developed an array of eco-solutions and systems to address the issues that this region had. initiatives such as "Humara Gaon", "Skills and Enterprises for Livelihood Security", etc. were taken up. This book discusses these initiatives in detail.<br>**URL:** https://www.devalt.org/images/L2_ProjectPdfs/Shubhkal.pdf?Oid=311 |
|  | **Title:** Training Module: Water, Urban Habitat and Agriculture Capacity Building of the Climate Change Management Society in Assam<br>**Year of Publication:** 2019<br>**Pages:** 84<br>**Keywords:** Agriculture, Climate Change<br>**Abstract:** The aim and objectives of this training module is to the Adaptation to Climate Change module provides Government officials in Assam, more specifically experts of the Assam Climate Change Management Society (ACCMS) and nodal officers of the water, agriculture and urban development departments, with necessary knowledge and skills on critical climate change topics, including causes and effects, application of strategies and technologies for adaptation response, financial resource development and effective communication to communities and other departments. |
|  | **Title:** Small Farmer Centric Sustainable Agriculture Programme Capitalisation Document<br>**Year of Publication:** 2019<br>**Pages:** 2<br>**Keywords:** Agriculture, FPO<br>**Abstract:** This document focuses on the state of agriculture in Bundelkhand region. It then highlights a project "catalysing change towards comprehensive agriculture systems" through policy, research and practice that has been initiated by a consortium of stakeholders, including development alternatives, INTACH and people science institute, with revitalising rain-fed agriculture networks. The project requires commitment to three point agenda: reduce high risks, increase the ease in doing farming, and enhance incomes.<br>**URL:** https://bit.ly/3kFKMzC |

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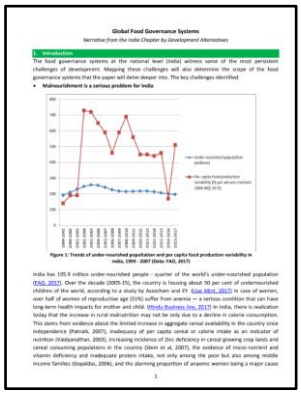
|  | **Title:** Global Food Governance Systems<br>**Year of Publication:** 2018<br>**Pages:** 12<br>**Keywords:** Agriculture, FPO<br>**Abstract:** The food governance systems at the national level (India) witness some of the most persistent challenges of development and there are various structures that drive Indian Food Systems towards the trends of malnourishment, livelihood insecurity and environment unsustainability. This paper focuses on these and further explains the vision of a New Agriculture and Food System. The vision is cognizant of global nature of the systems given the fluidity and inter-linked nature of labour, capital, products, services, technology and knowledge systems. Further it takes into account Sustainable Development Goals and Nationally Determined Commitments at the COP21.<br>**URL:** https://bit.ly/3tcEWcL |
|  | **Title:** Building Sustainability in Rain-fed Agriculture Production System - Consultation Report<br>**Year of Publication:** 2018<br>**Pages:** 16<br>**Keywords:** Agriculture, FPO<br>**Abstract:** A one-day Stakeholder Consultation was organised to bring together government, civil society, and farmer groups from Madhya Pradesh's Bundelkhand region. The objectives of the consultation were to understand the conditions and challenges in practising agriculture in Bundelkhand region; and also to throw light on possible approaches to build a comprehensive agriculture system in Bundelkhand, that enhances farmers' income, nutrition security and is environmentally sustainable. This report gives the proceedings and recommendations to take the initiative forward.<br>**URL:** https://bit.ly/3mU2bXU |
|  | **Title:** Policy Roundtable on Sustainability of Farmer Producer Organizations<br>**Year of Publication:** 2017<br>**Pages:** 9<br>**Keywords:** FPO, Livelihood, Agriculture<br>**Abstract:** A policy roundtable on 'Sustainability of Farmer producer organizations' was held at Lucknow NABARD Regional Office on 22nd August 2017, in partnership with NABARD and the Green Economy Coalition. The initiative was supported by the |

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| | Heinrich Boll Foundation and the European Union. The workshop discussed the sustainability of FPOs with a focus on income benefits and environment sustainability. The discussions focused on two aspects of the FPO: institutional strength, business and performance of the FPO. |
|  | **Title:** Policy Roundtable on Sustainability of Farmer Producer Organizations<br>**Year of Publication:** 2017<br>**Pages:** 21<br>**Keywords:** FPO, Livelihood, Agriculture<br>**Abstract:** A policy roundtable on 'Sustainability of Farmer producer organizations' was held at Tashi Delek, Gangtok, Sikkim on 28th November 2017, in partnership with Integrated Mountain Initiative and Green Economy Coalition. This consultation was held on Sikkim and its objective was to gather challenges that small farmers in Sikkim face and the opportunity in farmer producer organisations to enable better livelihood security and environment sustainability of agriculture<br>**URL:** http://www.map-sa.net/Publication/Doc/Final%20Proceedings_Sikkim%20(1).pdf |
|  | **Title:** Farmer Producer Organisations in India<br>**Year of Publication:** 2017<br>**Pages:** 12<br>**Keywords:** FPO, Livelihood, Resilient Economy<br>**Abstract:** This paper has been developed under year II of the research project 'Transforming the Development Paradigm', supported by Heinrich Boll Foundation. The focus of this paper is to study Farmer Producer Organisations at the practice and policy level and to explore policy lessons.<br>**URL:** http://www.devalt.org/images/L2_ProjectPdfs/Policy%20Brieft%2028.03.pdf |

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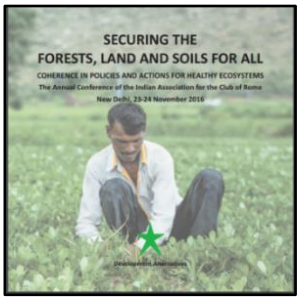
|  | **Title:** Building Resilience in Agriculture for Food Security<br>**Year of Publication:** 2016<br>**Pages:** 46<br>**Keywords:** Agriculture, Livelihood, Food Security<br>**Abstract:** This document is an outcome of a project titled 'Building Resilience in Agriculture for Food Security', funded by Heinrich Boll Foundation, for the economic development, social empowerment and environment management of our society.<br>**URL:** https://bit.ly/3jzYGDY |
|  | **Title:** Community based models for Food Security - Building resource resilience and livelihood security<br>**Year of Publication:** 2016<br>**Pages:** 2<br>**Keywords:** Community, Agriculture<br>**Abstract:** The trialogue 2047 aims to explore the role of community based models in building resource resilience, livelihood resilience in the agriculture systems while ensuring food security. Community models in agriculture offer an opportunity for small farmers to increase their productivities, incomes and resource efficiencies. Community agriculture Models are an arrangement of resource pooling by farmers at different parts of the value chain for increasing agriculture productivity, farmer incomes and ensuring sustainable resource use.<br>**URL**: https://bit.ly/3t70tUa |
|  | **Title:** Securing the Forests, Land and Soils for all<br>**Year of Publication:** 2016<br>**Pages:** 36<br>**Keywords:** Livelihood, Agriculture, Natural Resource<br>**Abstract:** Life on Earth depends on many resources and a vast number of interactions and flows among them. Critical among these are oxygen, carbon and nitrogen from the atmosphere, light and heat from the sun, food from terrestrial and ocean biomes, not to mention myriads of complex physical, chemical and biological cycles and geological processes. In this annual conference of CoR-India, DA attempts to explore the technological, economic and policy choices we can make that converge with goals of sustainability.<br>**URL:**<br>http://devalt.org/images/L2_ProjectPdfs/ForestLandSoilforAll_CoR.pdf?Oid=108 |

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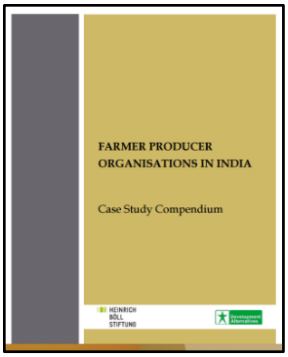
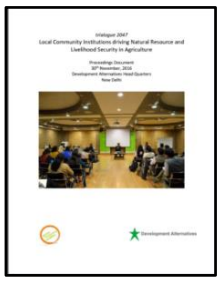
|  | **Title:** Wadi - Enabling Small Farmers to Secure their Livelihoods: A Photobook<br>**Year of Publication:** 2016<br>**Pages:** 32<br>**Abstract:** This photobook is a compendium of case studies that describes the journey of the wadi establishment process. It covers scientific principles of agroecology that enable an optimal and sustainable utilisation of the productive potential of land, while offering significant ecological co-benefits that help the degraded land to regenerate itself.<br>**URL:** http://devalt.org/images/L2_ProjectPdfs/WadiPhotobook.pdf?Oid=176 |
|  | **Title:** Farmer Producer Organisations in India: Case Study Compendium<br>**Year of Publication:** 2016<br>**Pages:** 59<br>**Keywords:** FPO, Livelihood<br>**Abstract:** This Case Study Compendium incorporates the background, approach, business performance and SWOT of six Farmer Producer Organisations (FPOs) actively working in India.<br>**URL:** http://devalt.org/images/L2_ProjectPdfs/CoR_Food_Security_Paper.pdf?Oid=69 |
|  | **Title:** trialogue2047 on 'Farmer Collectives driving Ecosystem Resilience<br>**Year of Publication:** 2016<br>**Keywords:** Green Economy, Livelihood<br>**Abstract:** This report provides the proceedings of the trialogue2047 on 'Farmer collectives driving ecosystem resilience and livelihood security'.<br>**URL:** http://devalt.org/images/L2_ProjectPdfs/trialogue2047onFPO.pdf?Oid=11 |

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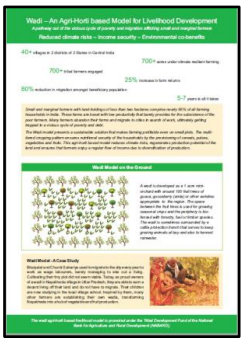
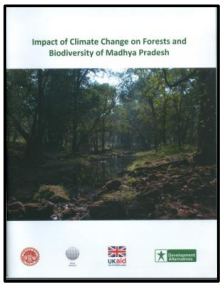
|  | **Title:** Wadi – An Agri-Horti Based Model for Livelihood Development: Capitalisation Document<br>**Year of Publication:** 2016<br>**Pages:** 2<br>**Keywords:** Livelihood, Agriculture<br>**Abstract:** This Capitalisation Document gives a snapshot of the Wadi model, including the design, economics and co-benefits to the environment.<br>**URL:** https://bit.ly/3DEZ24j |
|  | **Title:** Wadi - An Agro-Forestry Based Livelihood Development Model: Capitalisation Document<br>**Year of Publication:** 2016<br>**Pages:** 2<br>**Keywords:** Watershed, Livelihood<br>**Abstract:** This Capitalisation Document gives a snapshot of implementing the Integrated Watershed Management Model at the grassroots.<br>**URL:** https://bit.ly/3ByLCF5 |
|  | **Title:** Integrated Watershed Management for Water, Food and Livelihood Security in Rural India<br>**Year of Publication:** 2016<br>**Pages:** 2<br>**Keywords:** Watershed, Livelihood<br>**Abstract:** This Capitalisation Document gives a snapshot of implementing the Integrated Watershed Management Model at the grassroots.<br>**URL:** https://bit.ly/3heEgPB |
|  | **Title:** Impact of Climate Change on Forests and Biodiversity in Madhya Pradesh<br>**Year of Publication:** 2015<br>**Pages:** 44<br>**Keywords**: Biodiversity, Climate Change<br>**Abstract:** This report is a part of the DFID project 'Strengthening Performance Management in Government' (SPMG). It highlights the impact of climate change on forests and biodiversity in Madhya Pradesh.<br>**URL:**<br>http://devalt.org/images/L2_ProjectPdfs/(15)ForestsDiversity.pdf?Oid=150 |

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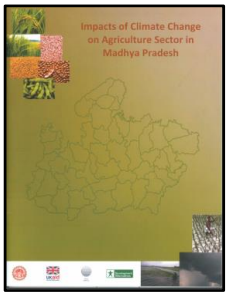
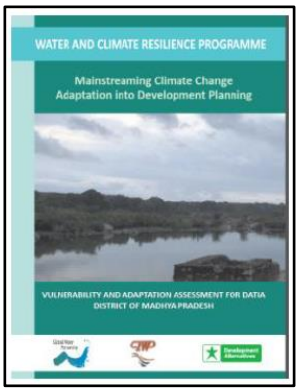
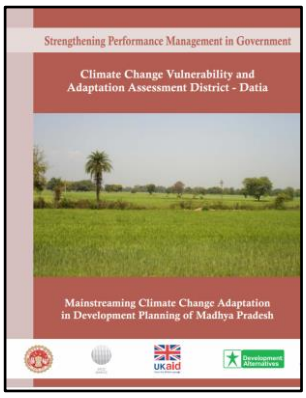
|  | **Title:** Impacts of Climate Change on Agriculture Sector in Madhya Pradesh<br>**Year of Publication:** 2015<br>Keywords: Climate Change, Agriculture<br>**Abstract:** This report is a part of the DFID project 'Strengthening Performance Management in Government' (SPMG). It highlights the impact of climate change on the agriculture sector in Madhya Pradesh.<br>**URL**: https://bit.ly/3t7iba6 |
|  | **Title:** Mainstreaming Climate Change Adaptation into Development Planning: Vulnerability and Adaptation Assessment for Datia District, Madhya Pradesh<br>**Year of Publication:** 2015<br>**Pages:** 71<br>**Keywords:** Climate Change, Agriculture, Forest<br>**Abstract:** The prime objective of vulnerability assessments is to identify vulnerable groups and their specification in terms of enhanced sensitivity or low adaptive capacity to the exposure. They provide the necessary evidence for planning adaptation, mitigation and resilience against climate change and help recommend or implement policies.<br>**URL:** http://devalt.org/images/L2_ProjectPdfs/(2)WACREP.pdf?Oid=137 |
|  | **Title:** Strengthening Performance Management in Government: Climate Change Vulnerability and Adaptation Assessment District - Datia<br>**Year of Publication:** 2015<br>**Pages:** 71<br>**Keywords:** Climate Change, Agriculture, Forest<br>**Abstract:** A comprehensive study of climate change vulnerability of Datia district was conducted and the major findings were lucidly drafted and presented in the form of this booklet .The facts emerged in the study were validated with primary and secondary data of each block to draw scientific conclusions about the extent of vulnerability in the sectors of water, agriculture and forest.<br>**URL:**<br>https://www.devalt.org/images/L2_ProjectPdfs/(13)CCDatia.pdf?Oid=148 |

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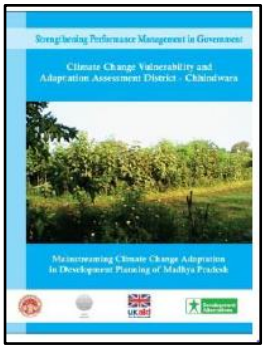
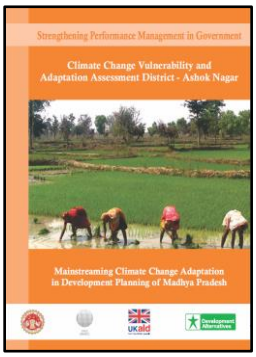
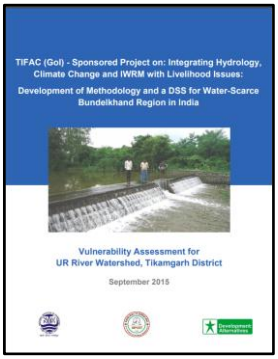
|  | **Title:** Climate Change Vulnerability and Adaptation Assessment District – Chhindwara<br>**Year of Publication:** 2015<br>**Pages:** 108<br>**Keywords:** Climate Change, Agriculture, Forest<br>**Abstract:** This study of Chhindwara district, Madhya Pradesh, highlights the scientific analysis of observed climatic trends (Exposure), their impacts (Sensitivity), as well as capacities to deal with the impacts (Adaptive Capacity).<br>**URL:** https://bit.ly/2WIWIsa |
|  | **Title:** Strengthening Performance Management in Government Climate Change Vulnerability and Adaptation Assessment District<br>**Year of Publication:** 2015<br>**Pages:** 71<br>**Keywords:** Climate Change, Agriculture, Forest<br>**Abstract:** A comprehensive study of climate change vulnerability of Ashok Nagar district was conducted and the major findings were lucidly drafted and presented in the form of this booklet. The facts emerged in the study were validated with primary and secondary data of each block to draw scientific conclusions about the extent of vulnerability in the sectors of water, agriculture and forest. |
|  | **Title:** Vulnerability Assessment for UR River Watershed, Tikamgarh District<br>**Year of Publication:** 2015<br>**Pages:** 6<br>**Keywords:** Climate Change, Agriculture<br>**Abstract:** In order to assess the livelihood related vulnerabilities and derive the strategies and solution for mitigating the impacts of climate change, a vulnerability assessment was conducted in the proposed Watershed area (Ur River Watershed). This area falls in the Tikamgarh district of Bundelkhand region.<br>**URL:** https://bit.ly/2WKk3JQ |

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|  | **Title:** Proceedings of trialogue 2047 Food Security: The Big Question of Resources<br><br>**Year of Publication:** 2015<br><br>**Pages:** 10<br><br>**Keywords:** Climate Change, Agriculture<br><br>**Abstract:** trialogue 2047 was held on 30 april 2015 on the topic "Food Security: The Big Question of Resources". Climate change, resource constraints, distribution and storage are some concerns that threaten India's food security. With increasing population and socio-economic developmental needs, access and availability of resources for food production shall be constrained. Water-Energy-Food Nexus is an interesting way of making judicious decisions for resource distribution. It provides an integrated view and comprehensive information on relative resource scarcity and productivity, and on the potential for resource intensification in different regions. It also points to the opportunities and synergies for increasing total resource use efficiency, and possibly also substitutions between resources.<br><br>**URL:** https://bit.ly/2Vezf1C |
|  | **Title:** Scaling up Adaptation Strategies for Climate Resilient Agriculture in India<br><br>COP 21, Paris<br><br>**Year of Publication:** 2015<br><br>**Pages:** 5<br><br>**Keywords:** Climate Change, Agriculture<br><br>**Abstract:** In order to showcase India's adaptation efforts and achievement in climate resilient development of the agriculture sector, a side event "Scaling up Adaptation Strategies for Climate Resilient Agriculture in India" was organised on 5th December, 2015 at the India Pavilion. Hosted by Ministry of Agriculture, Government of India, Coorganised by: NABARD, CRIDA, Development Alternatives (DA), NCCSD<br><br>**URL:** https://bit.ly/3mS13Ep |
| | **Title:** Climate Proofing Agriculture in Rain-fed Areas<br><br>**Year of Publication:** 2015<br><br>**Pages:** 6<br><br>**Keywords:** Climate Change, Agriculture<br><br>**Abstract:** The Bundelkhand region suffers from climatic variabilities, ecological challenges and high socio economic vulnerabilities. It is also one of the most underdeveloped regions |

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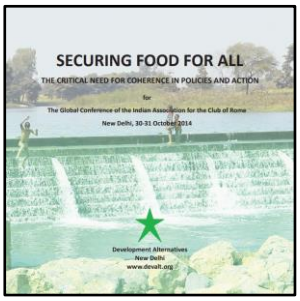
|  | of the country with poor human development indices. With an aim to ensure food security and sustainable livelihoods at scale, Development Alternatives has been working to promote sustainable agriculture systems in the Bundelkhand region. DA's climate resilient adaptation programme has tested systemic models which have helped to suggest key elements and pathways for building resilience of the agriculture systems and thus promote sustainable agriculture and livelihood. |
|  | **Title:** Securing Food For All: The Critical Need For Coherence In Policies And Action<br>**Year of Publication:** 2014<br>**Pages:** 24<br>**Keywords:** Food Security, Agriculture<br>**Abstract:** It is estimated that more than a hundred million of our fellow citizens go to sleep hungry and malnourished, each night. This booklet explores the design and functions of the institutions of the State, of business, and of civil society that are necessary - even if not entirely sufficient - to serve the ethical, ecological and societal purpose of speedily eliminating hunger and malnutrition from India.<br>**URL:** https://bit.ly/3jBdYZ3 |
|  | **Title:** Working Paper on Biodiversity based Livelihoods and Green Economy<br>**Year of Publication:** 2014<br>**Pages:** 4<br>**Keywords:** Livelihood, Green Economy<br>**Abstract:** This paper highlights how biodiversity is crucial for having a progressive economic growth, as well as for the subsistence of economies of poor and marginal communities.<br>**URL:** https://bit.ly/3jDdi5K |

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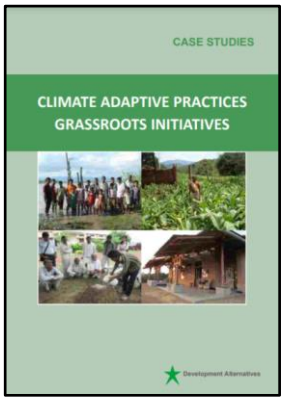
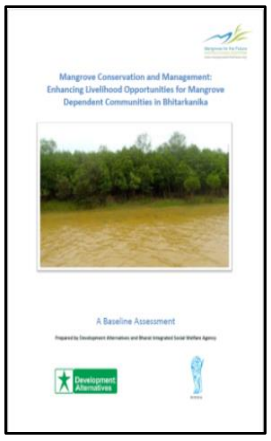
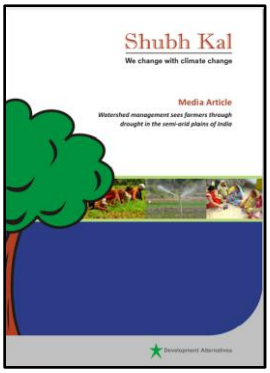
|  | **Title:** Climate Adaptive Practices Grassroots Initiatives<br>**Author:** Anshul Bhamra, Harshita Bisht, Rowena Mathew, Reemsha Reen, Seher Kulshreshtha, Shweta Prajapati<br>**Year of Publication:** 2014<br>**Keywords**:<br>**Abstract**: Uttarakhand has been impacted the most due to climatic events and disasters in Himalayan region. Ranging from disastrous events like floods and landslides; to an ecological shift in the region; there have been many climatic changes, which are impacting communities in Uttarakhand today. The temperature belts of Himalayan region have changed and warmed up in the last few years. This has led to a degradation of the traditionally grown fruits and crops in this area, and major shifts in agricultural practices.<br>**URL:** https://bit.ly/3gXljAx |
|  | **Title:** Mangrove Conservation and Management: Enhancing Livelihood Opportunities for Mangrove Dependent Communities in Bhitarkanika<br>**Year of** Publication: 2013<br>**Pages:** 17<br>**Keywords:** Climate Change, Livelihood<br>**Abstract**: This baseline assessment is based on two villages of the Bhitarkanika Wildlife Sanctuary and includes information on the socio-economic status of the respondents, assessment of natural resources and livelihoods in the area and information on climate change and vulnerability in the area.<br>**URL:** https://bit.ly/3talGfS |
|  | **Title:** Watershed management sees farmers through drought in the semi-arid plains of India<br>**Year of Publication:** 2013<br>**Pages:** 5<br>**Keywords:** Agriculture, FPO<br>**Abstract:** For Ram Singh from Chopra village in Bundelkhand, water means money. However, Mr. Singh is not selling mineral water. He is simply a farmer trying to survive in this drought prone area where over 70% of the population relies on rain fed agriculture. For these communities, a deficient monsoon can have disastrous effects - destroying crops, leaving families without food and forcing people to migrate to cities in search of work. |

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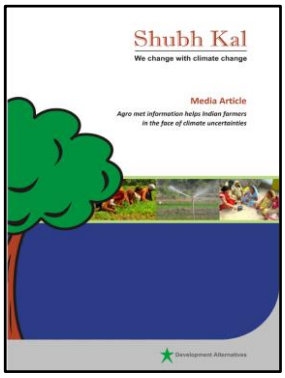
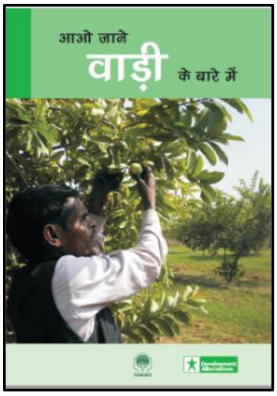
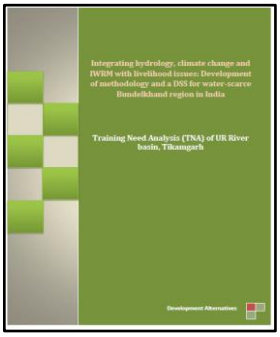
|  | **Title:** Agro met information helps Indian farmers in the face of climate uncertainties<br>**Year of Publication:** 2013<br>**Pages:** 5<br>**Keywords:** Agriculture, FPO<br>**Abstract:** For generations, Indian farmers have used traditional knowledge like assessing plant, animal and insect behaviour to understand weather patterns in order to make decisions about cropping and irrigation cycles. However, in recent years, farmers have been seeking scientific weather forecasts as opposed to just relying on traditional weather predictions to deal with increasing climate uncertainties. |
|  | **Title:** Aao Jane WADI Ke bare Main<br>**Year of Publication:** 2013<br>**Pages:** 16<br>**Keywords:** Livelihood, Climate Change<br>**Abstract:** This booklet explains the steps of preparing a WADI. This is a very good mixture of interesting content and pictorial visuals. WADI is a process by which barren land is rejuvenated and made green by sowing local plants and trees.<br>**URL:** http://devalt.org/images/L2_ProjectPdfs/(17)WADIManual.pdf?Oid=152 |
|  | **Title:** Training Need Analysis (TNA) of UR River basin, Tikamgarh<br>**Year of Publication:** 2013<br>**Pages:** 16<br>**Keywords:** Livelihood, Climate Change<br>**Abstract:** This study was conducted to identify the vikas mitras and training needs of Vikas mitras in the field of IWM, agriculture and allied areas. Ten Vikas mitras from the two block viz. Tikamgarh and Baldevgarh were selected using the disproportionate stratified random sampling method and were personally interviewed on a three point continuum as most needed, needed and least needed. |

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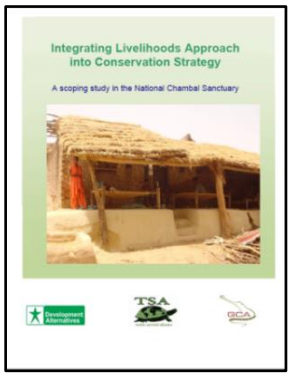
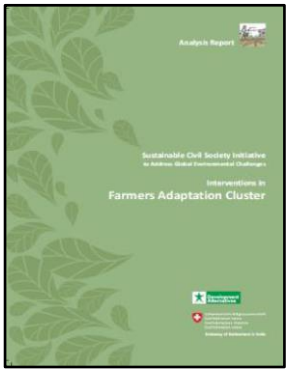
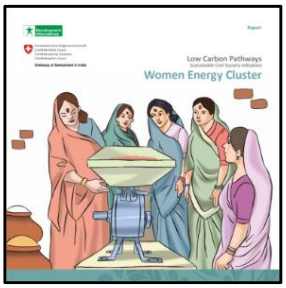
|  | **Title:** Integrating Livelihoods Approach into Conservation Strategy<br>**Year of Publication:** 2012<br>**Pages:** 39<br>**Keywords:** Livelihood, Conservation<br>**Abstract:** This is a scoping study in the National Chambal Sanctuary covering the five pilot villages of Gopiyakhar, Barolli, Kheda Ajabsingh, Nadgawa and Bacchedi along the Chambal river within Etawah district and the National Chambal Sanctuary Project, Agra, Uttar Pradesh. This report highlights the innovative livelihoods approach to complement the conservation process.<br>**URL:** https://bit.ly/3gUvq9w |
|  | **Title:** Interventions in Farmers Adaptation Cluster: Analysis Report<br>**Year of Publication:** 2011<br>**Pages:** 30<br>**Keywords:** Livelihood, Habitat, Women empowerment<br>**Abstract:** This document tries to analyse the interventions carried out in Farmer Adaptation Clusters (FAC), the observed impacts and their meaning in socio economic and environmental terms. Special emphasis has been given on differentiating the above in terms of the three clusters within the FAC, to assess reasons of non-homogenous uptake of various interventions.<br>**URL:** https://bit.ly/3t6eUrM |
|  | **Title:** Women Energy Cluster<br>**Year of Publication:**2011<br>**Pages:** 26<br>**Keywords:** Livelihood, Agriculture<br>**Abstract:** Bundelkhand is one of the most vulnerable and drought prone regions of India. Agriculture and livestock rearing is the mainstay of the regional economy. This project, aimed at reducing the vulnerability of rural communities, is a part of the Sustainable Civil Society Initiative (SCSI) to Address Global Environmental Challenges. The Initiative spans over a period of 15 years, with a long term vision to eradicate poverty and regenerate the natural resource base across 1000 villages in the region, in addition to addressing the vulnerabilities of farming and infrastructure.<br>**URL:**<br>http://devalt.org/images/L2_ProjectPdfs/Women_Energy_Cluster.pdf?Oid=64 |

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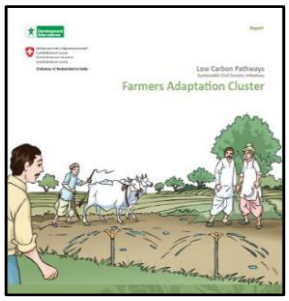
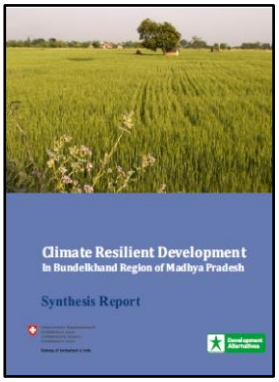
|  | **Title:** Farmers Adaptation Cluster: Low Carbon Pathways - Sustainable Civil Society Initiatives<br>**Year of Publication:** 2011<br>**Pages:** 26<br>**Abstract:** This report is on Sustainable Civil Society Initiatives with farmers in the period 2008-2011, whereby 100 small and marginal farmers were involved on a pilot basis to explore and adopt measures for drought resilience, increased productivity, enhanced incomes and greener jobs/ livelihood pursuits.<br>**URL:** http://devalt.org/images/L2_ProjectPdfs/FarmersAdaptationCluster.pdf?Oid=61 |
|  | **Title:** Overview: Low Carbon Pathways - Sustainable Civil Society Initiatives<br>**Year of Publication:** 2011<br>**Pages:** 30<br>**Abstract:** This initiative has promoted efficient resource use and enhanced incomes for small & marginal farmers, women's collectives, and building artisans by a synergy of indigenous and scientific knowledge. The process also involved packaging of technology based measures into market-based viable economic models for the target communities, financial investments and business initiatives, leading to reduced greenhouse gas emissions.<br>**URL:** https://bit.ly/3kJTCwh |
|  | **Title:** Climate Resilient Development in Bundelkhand Region of Madhya Pradesh: Synthesis Reporte<br>**Year of Publication:** 2013<br>**Pages:** 13<br>**Keywords:** Climate, Natural Resources<br>**Abstract:** This report highlights the initiatives of Development Alternatives in the Bundelkhand region of Madhya Pradesh. In the context of the development deficit that Bundelkhand region faces, formulating a climate resilient development strategy requires a systematic approach. Reflecting on the experience of the SCSI project and working with vulnerable communication of the region, the climate resilient development strategy includes - vulnerability & adaptation needs assessment, mapping information & communication needs and mainstreaming adaptation into planning process.<br>**URL:** https://bit.ly/2WHEpnA |

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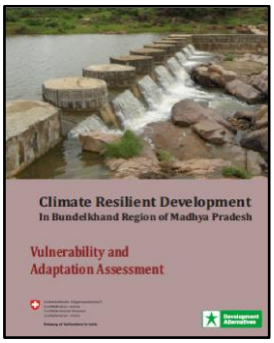
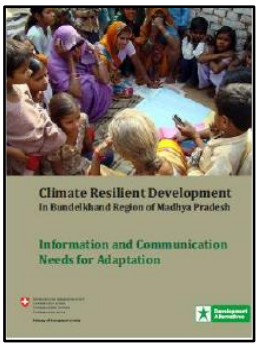
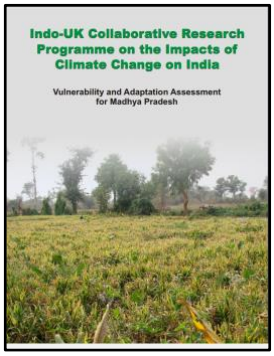
|  | **Title:** Climate Resilient Development in Bundelkhand Region of Madhya Pradesh: Vulnerability and Adaptation Assessment<br>**Year of Publication:** 2013<br>**Pages:** 49<br>**Keywords:** Climate Resilient, Agroforestry<br>**Abstract:** While there is evidence of various practices being implemented in the Bundelkhand region that address climate adaptation issues, the region as a whole is still very susceptible to current and future climate change. This report highlights the vulnerability and adaptation status of Bundelkhand region of Madhya Pradesh, with respect to climate resilient development.<br>**URL:**<br>http://devalt.org/images/L2_ProjectPdfs/(5)ClimateResilientDev.pdf?Oid=140 |
|  | **Title:** Climate Resilient Development in Bundelkhand Region of Madhya Pradesh: Information and Communication Needs for Adaptation<br>**Year of Publication:** 2013<br>**Pages:** 15<br>**Abstract:** This report focuses on the current systems and institutions that are in place to enable information and knowledge for climate change adaptation to reach the grassroots in the Bundelkhand region of India, and the need to mainstream it into policy and practice at the state and national level.<br>**URL:**<br>http://devalt.org/images/L2_ProjectPdfs/(4)ClimateResilientIC.pdf?Oid=139 |
|  | **Title:** Indo-UK Collaborative Research Programme on the Impacts of Climate Change on India<br>**Year of Publication:** 2012<br>**Pages:** 111<br>**Keywords:** Climate Change, Agriculture<br>**Abstract**: This research programme was undertaken in Madhya Pradesh to study climate change issues and devise measures to deal with their serious effects. It aimed at preparing a climate change adaptation plan supported and catalysed mainly within the agricultural system, and to integrate it with the existing programmes and schemes in the states.<br>**URL:**<br>http://devalt.org/images/L2_ProjectPdfs/(6)IndoUKResearch.pdf?Oid=141 |

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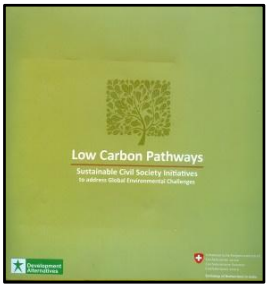
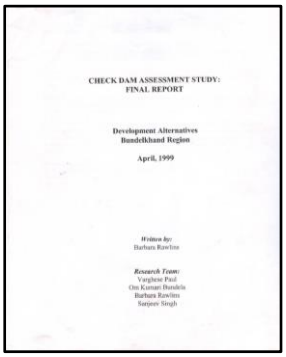
|  | **Title:** *Paryavaran Anukool Vikas, Kisan Anukool Samooh - A Training Manual*<br>**Year of Publication:** 2012<br>**Keywords:** Climate Change, Agriculture<br>**Abstract:** This training manual is in 5 sets, consisting of: ravi crop sowing, kharif crop sowing, gardening, inter-cropping and advanced agriculture training kits. |
|  | **Title:** Low Carbon Pathways: Sustainable Civil Society Initiatives to Address Global Environmental Challenges<br>**Year of Publication:** 2011<br>**Pages:** 29<br>**Keywords:** Natural Resources, Agriculture<br>**Abstract:** The Bundelkhand region has tremendous potential with its diverse natural resources, a workforce trained in traditional agriculture and artisanship and a rich indigenous time-tested knowledge base. This base remains an untapped resource, particularly in terms of regeneration of water and soil. This report covers the activities carried out over a period of three years, from 2008 to 2011, with respect to the processes and pathways focusing on farmers, women and building artisans.<br>**URL**:<br>http://devalt.org/images/L2_ProjectPdfs/LowCarbonPathways.pdf?Oid=62 |
|  | **Title:** Check Dam Assessment Study<br>**Year of Publication:** 1999<br>**Pages:** 98<br>**Keywords:** Agriculture, FPO<br>**Abstract:** The purpose of the study was not only to determine the actual benefits that accrued to project –affected people and gather feedback on the appropriateness of the check dams as an intervention, but also to design and field test an evaluation methodology that could be adapted and applied DA's others sustainable livelihood projects . The study also gathered information on community problems, maternal and child health matters etc.<br>URL: https://www.devalt.org/newsletter/apr01/of_3.htm |

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|  | **Title:** Impact of Air pollution on Agriculture in India<br>**Year of Publication:** 1997<br>**Pages:** 44<br>**Keywords:** Agriculture<br>**Abstract:** This case study focuses on collating the agriculture data for the subsistence crops, cash crops, export and commercial crops and horticulture crops of the following states: Punjab, Haryana, Uttar Pradesh, Maharashtra and Gujarat. |
| **Webinars** | |
|  | **Title**: Empowering Women to address Climate Change Issues for achieving Sustainable Development Goals<br>**Author**: Gitika Goswami<br>**Year of Publication**: 2021<br>**Published by:** IMPRI India<br>**Pages**: 27<br>**Keywords**: Climate change, Women, Development<br>**Abstract**: There are varied climate challenges in India which often leads to the efforts of rural women to fetch water or other very basic needs of daily life. This issue is addressed in this presentation with up-to-date relevant statistics.<br>**URL**: https://bit.ly/3d2wndW |
|  | **Title:** Investing in Nature to Build Back Better<br>**Author:** Zeenat Niazi, Gitika Goswami, Stella George<br>**Published by:** UN Environment Program<br>**Year of Publication:** 2021<br>**Pages:** 89<br>**Keywords:** Climate, Sustainable development, COVID - 19<br>**Abstract:** Investing in nature presents an opportunity to strengthen climate action, align with Sustainable Development Goals (SDGs) and Nationally Determined Contributions (NDCs) towards climate change. The role of sub-national actors is a critical link in enhancing resilience against climate change related crises, including COVID-19. They form a complementary part of national policy making and governance as region specific considerations are crucial elements of most initiatives and undertakings. The revision of the State Action Plans on Climate Change (SAPCCs) is an opportunity for states to prepare a |

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| | strategy to enhance their climate resilience and strengthen the existing mechanisms for addressing climate change.<br>**URL:** https://bit.ly/2ViHQQY |
| **Blogs** | |
|  | **Title:** Preparing Rural Communities for Climate Smart Farming<br>**Author:** Sandeep Khanwalkar<br>**Year of Publication:** 2020<br>**Keywords**: Farmers, Crop security, Agriculture, Rural, Climate smart<br>**Abstract**: Development Alternatives (DA) has been running Farmers Field Schools (FFS) in the region to demonstrate the appropriate farming practices to ensure crop security through participatory methods. As per the Food and Agriculture Organisation of the United Nations, FFS is an innovative, participatory and interactive learning approach that emphasises problem-solving and discovery-based learning. It aims to build farmers' capacities to analyse their production systems, identify problems, test possible solutions and eventually encourage the participants to adopt the practices most suitable to their farming systems.<br>**URL:** https://bit.ly/3BrdmeS |
|  | **Title:** Sustainable Agriculture – Calling for a Plurality of Indicators<br>**Author:** Mayukh Hajra<br>**Year of Publication:** 2017<br>**Keywords**: Agriculture, Economy, Ecology,<br>**Abstract**: To equate agricultural development with a single-minded pursuit of productivity, can no longer be afforded – the striving for higher and higher farm production per unit of land, regardless of the ecological and social costs involved. The dependence on productivity as the singular measure of success must be replaced with a plurality of indicators that encompass various dimensions of impact, including not just the economic, but also the ecological and the social, and equally importantly, that throw light on the long-term repercussions of actions.<br>**URL:** https://bit.ly/3mZJ8vp |

| **External Publications** | |
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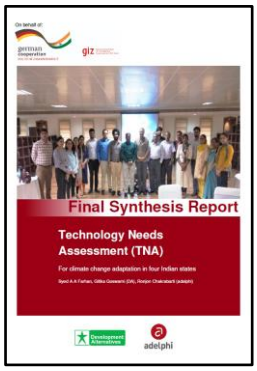
|  | **Title:** Final Synthesis Report: Technology Needs Assessment (TNA) For climate change adaptation in four Indian states<br><br>Author:<br><br>**Year of Publication:** 2019<br><br>**Pages:** 68<br><br>**Keywords:** Agriculture, Climate Change, Water<br><br>**Abstract:** The report is largely based on, and draws from, the synthesis report of the outreach workshop in Delhi on October 25th and 26th, 2019. It also contains references to further products which were generated in the project and which complement this report. |
|  | **Title:** Nature-based solutions and their application in river basin management BRIDGE GBM CSO dialogue report<br><br>**Author:** IUCN<br><br>**Published by:** IUCN<br><br>**Year of Publication:** 2018<br><br>**Pages:** 20<br><br>**Keywords:** Water, Framework, River<br><br>**Abstract:** Building River Dialogue and Governance, or BRIDGE, is a global programme implemented by IUCN in more than 15 shared river basins across Asia, Africa and the Caribbean. The goal of the programme was to support capacities of countries and stakeholders sharing river or lake basins to implement effective water management arrangements through the development of a shared vision, benefit-sharing principles, and transparent and coherent institutional frameworks.<br><br>**URL:** https://bit.ly/38O75NZ |

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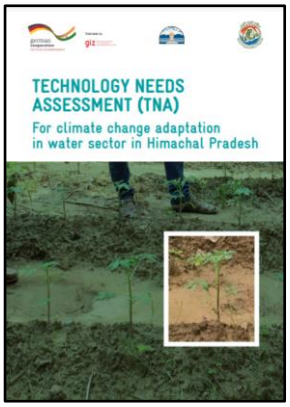
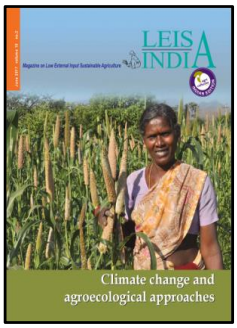
|  | **Title:** Technology Needs Assessment (TNA) For climate change adaptation in water sector in Himachal Pradesh<br>**Author:** Mr. Ronjon Chakrabarti, Mr. Syed A A Farhan, Ms. Gitika Goswami<br>**Published by:** Deutsche Gesellschaft Für Internationale Zusammenarbeit (GIZ) Gmbh<br>**Year of Publication:** 2018<br>**Pages:** 46<br>**Keywords:** Water, Agriculture, Technology, Environment<br>**Abstract:** This report is the outcome of a stakeholder-driven Technology Needs Assessment (TNA) for adaptation in the water and agriculture sector to identify and assess environmentally sound technologies that will, within national development objectives, reduce the impact of climate change in Himachal Pradesh.<br>**URL:** https://bit.ly/3nbPo3c |
|  | **Title:** Developing Climate Resilient Farming<br>**Author:** Anshul Bhamra, Syed A A Ishaqi Farhan<br>**Published by:** Leisa India<br>**Year of Publication:** 2017<br>**Pages:** 25-27<br>**Abstract:** This article has been published in the LEISA India Magazine, June 2017 Volume 19 No.2. Small farmers in Bundelkhand are adopting agricultural systems that cope with climate change, with support from Development Alternatives. The initiatives undertaken at the farm level and landscape level, are being upscaled building long term sustainability of climate resilient agriculture systems in Bundelkhand.<br>**URL:** https://bit.ly/3mSXWMf |

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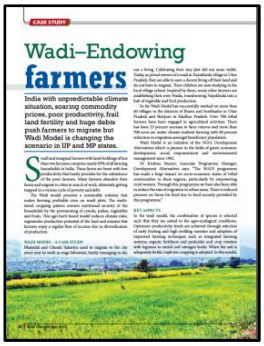
|  | **Title**: Community led Resource Efficient Agriculture in Bundelkhand<br>**Author:** Mayukh Hajra<br>**Published by:** CIPT Compendium - Best Practices on Water and Agricultural Sustainability'<br>**Year of Publication:** 2017<br>**Pages:** 43-44<br>**Abstract:** This case study highlights community led resource efficient agriculture initiatives undertaken by Development Alternatives in Bundelkhand. This is one of the 32 success stories from 19 states involving local NGOs, universities, corporate foundations, donor agencies and research organisations.<br>**URL**: https://bit.ly/3t6u1kZ |
|  | **Title:** Sustaining Farm Productivity through Watershed Based Participatory Balance Nutrient Management: A Case Study from Semi-Arid Tropics of Central India<br>**Author:** D.R. Palsaniya , Ramesh Singh , R.K. Tewari , S.K. Dhyani , R.S. Yadav , S.P. Wani , R. Sachan, S.N. Pandey<br>**Published by: :** Indian Journal of Soil Conservation<br>**Year of Publication:** 2016<br>**Pages:** 6<br>**Abstract:** This paper is based on action research conducted at Domagor-Pahuj watershed located in Babina block of Jhansi, where DA, with scientific support from NRCAF, is developing a model watershed under the aegis of ICRISAT.<br>**URL**: http://oar.icrisat.org/9819/1/ijsc-44-1-003.pdf |
|  | **Title:** Wadi–Endowing Farmers: Case Study<br>**Author:** Development Alternatives<br>**Published by: :** Rural Connect<br>**Year of Publication:** July 2015<br>**Pages:** 30-31<br>**Abstract:** India, with unpredictable climate situations, soaring commodity prices, poor productivity, frail land fertility and huge debts, pushes its farmers to migrate; but the Wadi Model is changing the scenario in the states of Uttar Pradesh and Madhya Pradesh.<br>**URL**: https://bit.ly/2Uv9MAk |

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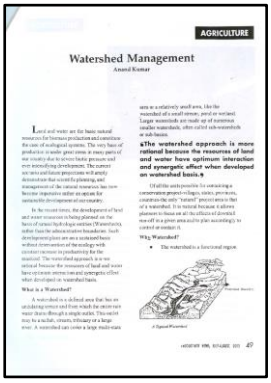
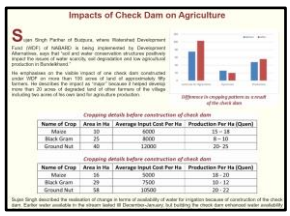
|  | **Title:** Watershed Management<br>**Author:** Anand Kumar<br>**Published by:** Productivity News<br>**Year of Publication:** 2003<br>**Pages:** 49-52<br>**Abstract:** This article focuses on land and water are the basic natural resources for biomass production and constitute the core of the ecological system. The very base of production is under great stress in many parts of our country due to service biotic pressure and ever intensifying development. |
|  | **Title:** Application of Remote sensing and Geographic Information System (GIS) in Watershed management<br>**Author:** Anand Kumar<br>**Year of Publication:** 2003<br>**Pages:** 16<br>**Keywords:** Agriculture, FPO<br>**Abstract:** This paper seeks to demonstrate the usefulness of GIS technology in conjunction with Remote Sensing in watershed management. The watershed approach is more national because the resources of land and water have optimum interaction and system effect when developed on watershed basis all over India. |
| **DA Newsletters** | |
|  | **Title:** Impacts of Check Dam on Agriculture<br>**Author:** Rishabh Singh<br>**Year of Publication:** 2021<br>**Keywords:** Soil, Water, Conservation, Agriculture<br>**Abstract:** Soil and water conservation structures positively impact the issues of water scarcity, soil degradation and low agricultural production in Bundelkhand. The visible impact of one check dam constructed under WDF on more than 100 acres of land of approximately fifty farmers. This impact is major because it helped develop more than 20 acres of degraded land of other farmers of the village including two acres of his own land for agriculture production.<br>**URL:** https://www.devalt.org/newsletter/mar21/of_4.htm |

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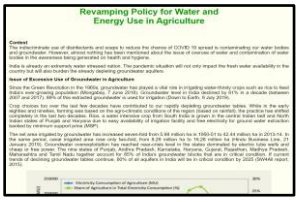
|  | **Title:** Climate Smart Farming<br>**Author:** Sandeep Khanwalkar, Lalit Kumar Gangwar, Rishabh Singh, Siddharth Jain, Sherine TP, C.P. Niranjan, Mariyam Majeed<br>**Year of Publication:** 2020<br>**Volume:** 30 **No:** 12<br>**Keywords:** Agriculture, Climate, Radio, Watershed<br>**Abstract:** This newsletter discusses how agriculture can be improved in areas that face adverse climatic effects and have uncertainty regarding it. The titles in this volume are Preparing Rural Communities for Climate Smart Farming, Farmer Field Schools Improve Crop Security in Climate Sensitive Bundelkhand, Sustainable Agriculture and Watershed Management is Improving Lives at the Grassroots, Water Flow Analysis for Cities and Communicating Climate Resilient Agricultural Practices through Community Radio.<br>**URL:** https://www.devalt.org/newsletter/dec20/dec20.htm |
|  | **Title:** Revamping Policy for Water and Energy Use in Agriculture<br>**Author:** Gitika Goswami<br>**Year of Publication:** 2020<br>**Keywords:** Covid-19, Water, Disinfectants, Agriculture<br>**Abstract:** The indiscriminate use of disinfectants and soaps to reduce the chance of COVID 19 spread is contaminating our water bodies and groundwater. However, almost nothing has been mentioned about the issue of overuse of water and contamination of water bodies in the awareness being generated on health and hygiene. India is already an extremely water stressed nation. The pandemic situation will not only impact the fresh water availability in the country but will also burden the already depleting groundwater aquifers. This newsletter highlights ways on how to deal with it and implement ways on how to use this water for agriculture.<br>**URL:** https://www.devalt.org/newsletter/jul20/of_5.htm |
|  | **Title:** Biological Diversification in Agriculture<br>**Author:** Sanyukta Kumari<br>**Year of Publication:** 2020<br>**Keywords:** Climate change, Biodiversity, Disaster, Covid-19, Water, Agriculture<br>**Abstract:** Climate change and the need to address biodiversity conservation have gained enough traction in the past two decades. Whether it's the COVID-19 pandemic or cyclone Amphan which |

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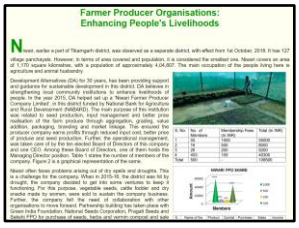
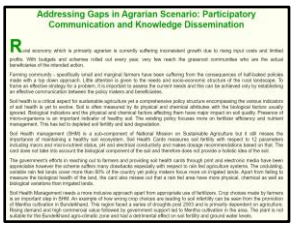
| | created havoc in the eastern parts of the country or the recent oil spill in Tinsukia in Assam, issues concerning biodiversity need more attention than ever. Imagining a post COVID-19 world without addressing biodiversity concerns will only aggravate the situation. This article throws light on how to create biological diversification in agriculture to achieve food and water security.<br><br>**URL:** https://www.devalt.org/newsletter/jun20/of_1.htm |
|  | **Title:** Farmer Producer Organisations: Enhancing People's Livelihoods<br><br>**Author:** Gyas Ahmed<br><br>**Year of Publication:** 2020<br><br>**Keywords:** Drought, Farmer, Livestock, Agriculture<br><br>**Abstract:** Niwari often faces problems arising out of dry spells and droughts. In 2015-16, the district was hit by drought, DA decided to get into some ventures to keep it functioning. For this purpose, vegetable seeds, cattle fodder and dry snacks made by women were sold to sustain the company business. This newsletter focuses on how this situation was tackled.<br><br>**URL:** https://www.devalt.org/newsletter/feb20/of_2.htm |
|  | **Title:** Addressing Gaps in Agrarian Scenario: Participatory Communication and Knowledge Dissemination<br><br>**Author:** Harsha G Kurup<br><br>**Year of Publication:** 2019<br><br>**Keywords:** Rural, Soil, Economy, Agriculture<br><br>**Abstract:** Rural economy which is primarily agrarian is currently suffering inconsistent growth due to rising input costs and limited profits. With budgets and schemes rolled out every year, very few reach the grassroot communities who are the actual beneficiaries of the intended action. This newsletter emphasises on the gaps that are found in the Farming community, like soil health.<br><br>**URL:** https://www.devalt.org/newsletter/dec19/of_3.htm |

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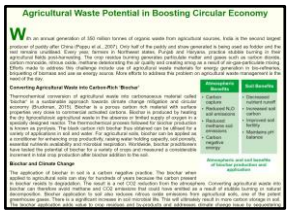
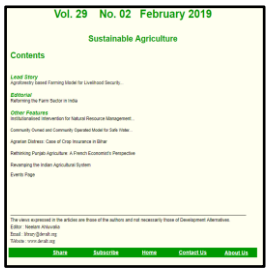
|  | **Title:** Agricultural Waste Potential in Boosting Circular Economy<br>**Author:** Dr. Ankur Sarswat<br>**Year of Publication:** 2019<br>**Keywords:** Agriculture, Farmer, Paddy, Organic waste, Waste, Energy<br>**Abstract:** With an annual generation of 350 million tonnes of organic waste from agricultural sources, India is the second largest producer of paddy after China. Every year, farmers in Northwest states, Punjab and Haryana, practice stubble burning in their agricultural fields post-harvesting. The crop residue burning generates particulate matter and gases such as carbon dioxide, carbon monoxide, nitrous oxide, methane deteriorating the air quality and creating smog as a result of air-gas-particulate mixing. Efforts made to address this challenge include use of agricultural waste materials for energy generation in bio-refineries, briquetting of biomass and use as energy source.<br>**URL:** https://www.devalt.org/newsletter/apr19/of_2.htm |
|  | **Title:** Sustainable Agriculture Newsletter<br>**Authors**: Omkar Gupta, Gunjesh Kumar Gunjan, Mayukh Hajra, Medha, Bruno DORIN, Satabdi Mohapatra<br>**Year of Publication:** 2019<br>**Abstract:** This newsletter focuses on Agroforestry based Farming Model for Livelihood Security and in particular discusses the WADI project. Based on the successful experiences of agro-horti based tribal development programmes in Jhansi and Shivpuri districts of Bundelkhand, Development Alternatives promoted small orchards, popularly known as 'WADI' with 1600 families in Sonebhadra district of Uttar Pradesh, India. These use scientific techniques for natural resource management, are economically viable and lead to a host of ecological co-benefits.<br>**URL:** https://www.devalt.org/newsletter/feb19/feb19.htm |
|  | **Title:** Communicating Resource Efficiency in Agriculture<br>**Authors**: Satabdi Mohapatra<br>**Year of Publication:** 2018<br>**Abstract:** The article focuses on Communicating Resource Efficiency in Agriculture- focusing on the concept of technical efficiency, allocative efficiency and environmental efficiency. It aims to maximise farm income sustainably at the least cost. This |

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| | requires a fundamental transition in agriculture from the linear production and consumption process to a 'circular economy' concept where resources are put back into the loop while the livelihood of producers are secured with appropriate market models that incentivises resource efficiency.<br><br>**URL:** https://www.devalt.org/newsletter/dec18/of_4.htm |
|  | **Title:** Sustainable Agriculture Newsletter Vol. 27 No. 12<br><br>**Authors:** Nibedita Phukan, Shobhit Pratap Singh, Satabdi Mohapatra, Mayukh Hajra, Kavya Arora, Gitika Goswami<br><br>**Year of Publication:** 2017<br><br>**Abstract**: This newsletter focuses on addressing the challenges in agriculture as well building capacities through an inclusive approach that includes schedule castes farmers. The articles also focus on FPOs, and empowering women through innovative agricultural practices. The lead story focuses on community based collective movements that involve sustainable agricultural practices that can bring a positive change to the current climate change narrative.<br><br>**URL:** https://www.devalt.org/newsletter/dec17/Dec17.htm |
|  | **Title:** Women's Federations - Paving the Way for a Better Tomorrow<br><br>**Authors**: Mahua Tripathy<br><br>**Year of Publication:** 2017<br><br>**Abstract:** Over the last two years, Sahyogini Mahila Mandal (SMM), a women's federation in Jhansi has established itself as a pioneer in collectivising and empowering poor rural women to institute a model of women leadership that is resulting in improving quality of life for themselves, their families and their communities. The federation was formed in 2014 with support from NABARD and Development Alternatives with the mission of socio-economic empowerment of women aimed at social recognition, income generation and self-reliance.<br><br>**URL:** https://www.devalt.org/newsletter/mar17/of_1.htm |

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|  | **Title:** Scaling Up Mechanisms for Entrepreneurship<br>**Authors:** Priyali Bhardwaj and Leon Sra<br>**Year of Publication**: 2017<br>**Keywords:** Agriculture, Enterprise<br>**Abstract**: This article focuses on micro enterprises for growth. Over the past 30 years, Development Alternatives has supported over 500 enterprises in agri and paper waste management. In the agriculture sector, on-farm, off-farm and farming services based business models have been demonstrated on ground along with women led aggregation platforms for production and marketing. These micro enterprises boost job creation and fuel equitable economic development.<br>**URL:** https://www.devalt.org/newsletter/sep17/lead.htm |
|  | **Title**: Sustainable Agriculture<br>**Authors:** Dr. S.K. Dhyani, Gunjesh Kumar Gunjan, Mayukh Hajra, Medha, Bruno DORIN, Satabdi Mohapatra<br>**Year of Publication:** 2016<br>**Abstract:** This newsletter focuses on climate change as major challenges facing agriculture and how alternate solutions can be formed by combining innovations, technology and the community. This newsletter focuses on Agroforestry based Integrated Watershed Development which has multiple benefits such as enhanced crop intensification, yield enhancement, enhanced ground water, reduced siltation, increased economic water productivity, ecosystem services and assured income and livelihoods.<br>**URL:** http://www.devalt.org/newsletter/dec16/dec16.htm |
|  | **Title:** Small Farmers - Big Challenges and even Bigger Opportunities<br>**Author:** Mayukh Hajra<br>**Year of Publication:** 2016<br>**Abstract:** The Taragram Yatra 2016 held in September 2016 had 'Community Models in Agriculture for Food, Resource and Livelihood Security' as one of its key themes and provided a platform for decision makers, civil society practitioners, academicians and businesses working in areas of farmers' livelihoods and food security including the promotion of FPOs to share lessons from their respective fields and deliberate on the challenges and opportunities for promotion of FPOs.<br>**URL**: https://www.devalt.org/newsletter/nov16/of_4.htm |


Doubling Farmer Incomes by 2022 and India's Agriculture Scenario

**Title:** Doubling Farmer Incomes by 2022 and India's Agriculture Scenario

**Author:** Mayukh Hajra

**Year of Publication:** 2016

**Abstract:** Conditions of farmers have been worsening over time with limited resource availability, higher vulnerabilities to climate and market and low output price. The number of farmer suicides nationwide rose to an average of 52 a day in 2015. NITI *Aayog's* Task Force on Agricultural Development has highlighted priority areas of work in the agriculture sector. This article focuses on Developmental Alternatives policy suggestions for doubling farmer incomes and the priority setting exercise by NITI's task force.

**URL:** https://www.devalt.org/newsletter/jun16/of_4.htm


Drought Management in Indian Agriculture

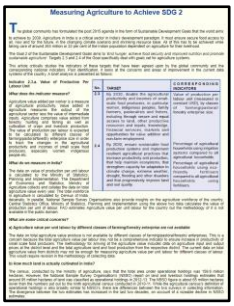
**Title:** Drought Management in Indian Agriculture

**Authors:** Kunal Ranjan Tiwari, Krishna Murari

**Year of Publication:** 2016

**Abstract:** Drought is an insidious natural hazard with far-reaching impacts that range from economic losses to losses in agriculture and livelihoods. Drought can cause or exacerbate water, food and national security hazards. Rainfall, temperature, evaporation, vegetation health, soil moisture, stream flow etc. are some of the critical parameters/indices that are used in drought risk analysis. This article focuses on Development Alternatives' Strategies for Drought Management in Bundelkhand.

**URL:** https://www.devalt.org/newsletter/jun16/lead.htm


Measuring Agriculture to Achieve SDG 2

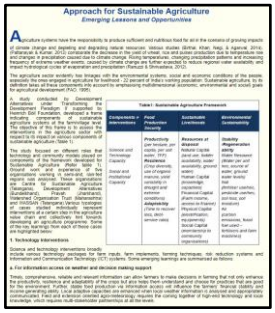
**Title**: Measuring Agriculture to Achieve SDG 2

**Authors**: Anshul S Bhamra

**Year of Publication:** 2016

**Abstract**: The Goal 2 of the Sustainable Development Goals aims to '*End hunger, achieve food security and improve nutrition and promote sustainable agriculture'.* Targets 2.3 and 2.4 of the Goal specifically deal with goals set for agriculture systems. This article critically studies the indicators of these targets that have been agreed upon by the global community and the corresponding national indicators. Post identification, it looks at the concerns and areas of improvement in the current data systems of the country.

**URL:** https://www.devalt.org/newsletter/feb16/of_3.htm


Approach for Sustainable Agriculture
Emerging Lessons and Opportunities

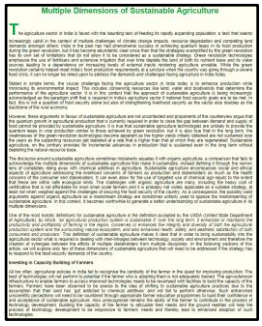
**Title:** Approach for Sustainable Agriculture- Emerging Lessons and Opportunities

**Authors**: Anshul S Bhamra

**Year of Publication:** 2016

**Abstract**: This article presents key learning from a case study by development alternatives which was under 'Transforming the Development Paradigm II' supported by Heinrich Böll Foundation, developed a frame indicating components of sustainable agriculture systems at the farm/village level. The objective of this frame is to assess the interventions in the agriculture sector with respect to its impact on various components of sustainable agriculture

**URL:** https://www.devalt.org/newsletter/feb16/of_4.htm


Multiple Dimensions of Sustainable Agriculture

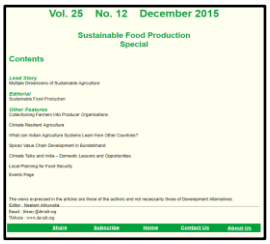
**Title:** Multiple Dimensions of Sustainable Agriculture

**Authors**: Mayukh Hajra

**Year of Publication:** 2015

**Abstract:** This article focuses on India's need to transition to sustainable agriculture from its current agricultural regime. It will need to act on its multiple dimensions in a synergistic manner. It also becomes clear from the above dimensions that the true measure of the success of sustainable agriculture will be in its ability to reinstall the farming community's faith in agriculture as a viable livelihood and its competence in helping farmers adapt to the changing climate and reducing their vulnerability

**URL:** https://www.devalt.org/newsletter/dec15/lead.htm


Vol. 25 No. 12 December 2015

Sustainable Food Production Special

Contents

**Title:** Sustainable Food Production Special

**Authors:** Mayukh Hajra, Mohua Tripathi, Omkar Gupta, Dr. K. Murari, Anshul S Bhamra, Chitrangna Dewan, Zeenat Niazi, Harshita Bisht, Chandan Kumar Mishra

**Year of Publication:** 2015

**Abstract:** This newsletter focuses on the crucial challenge facing the agriculture sector in India today, which is to enhance production while minimising its environmental impact. This includes conserving resources like land, water and biodiversity that determine the performance of the agriculture sector. It is in this context that the approach of sustainable agriculture is being increasingly acknowledged as the paradigm shift that is required in India's agriculture sector if national food security goals are to be met. In fact, this is not a question of food security alone but also of strengthening livelihood security, agricultural community as the sector also doubles as the backbone of the rural economy.

**URL:** https://www.devalt.org/newsletter/dec15/dec15.htm

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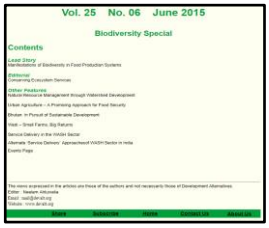
|  | **Title:** Biodiversity Special<br><br>**Authors:** Mayukh Hajra, Kavneet Kaur, Parul Bansal, Dr.Krishna Murari Krishna Ghalley, Chitrangna Dewan and Mohua Tripathy,<br><br>**Year of Publication:** 2015<br><br>**Abstract:** In India, agricultural policies targeted at achieving food security outcomes have narrowly focused on increasing the production of wheat and rice leading to a decline in the cultivation of grains such as millets and consequently their representation in our diets. This has led to loss of crop diversity and negative consequences on nutrition security of people living in rain-fed areas. Millets are eminently suitable for rain-fed areas as they are adapted to conditions of low water availability. This newsletter focuses on alternatives such as agro-forestry and agri-horticulture, WADI projects, urban agriculture etc.<br><br>**URL:** https://www.devalt.org/newsletter/Jun15/Jun15.htm |
|  | **Title:** Natural Resources Management and Institutions<br><br>**Authors:** Shiv Bhushan Pandey, Mayukh Hajra, Mohua Tripathy, Chandan Mishra, Kavneet Kaur, Rakesh Singh, S.B. Pandey, Mayukh Hajra<br><br>**Year of Publication:** 2014<br><br>**Abstract**: The agriculture sector currently accounts for about 17% of the carbon footprint of India and the promotion of agri-horti and agro-forestry based models such as the *wadi* can go a long way in reducing the carbon intensity of the sector. Conventional agriculture has been witnessing depleting productivity levels as a result of a combination of factors that include the adoption of unsustainable land, water and nutrient management practices, diminishing farm sizes and farm investment and increasing climate change impacts. The *Wadi* model demonstrates improved resilience to climate change impacts and regenerates the production potential of the land and the health of the natural resource base.<br><br>**URL:** https://www.devalt.org/newsletter/jul14/jul14.htm |

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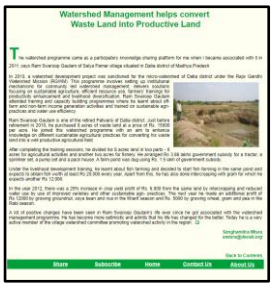
|  | **Title**: Food Security - A Multi-faceted Challenge Requiring A Multi-layered Response<br><br>**Authors**: Mayukh Hajra<br><br>**Year of Publication:** 2014<br><br>**Abstract:** This article has touched upon some of the key aspects that need to be addressed to meet the food security challenge. The aspects highlighted are Optimising Agricultural Productivity, Agricultural Diversification, Reclaiming Wastelands and Urban Spaces, Sustainable Agriculture for Adaptation to Climate Change, Putting the Farmer First. This will require efforts of multiple stakeholders, from the farmer to the scientist and the policy maker to converge and collaborate across disciplines.<br><br>**URL:** https://www.devalt.org/newsletter/dec14/lead.htm |
|  | **Title:** Agroforestry for Food and Environmental Security<br><br>**Authors**: Dr. S.K Dhyani<br><br>**Year of Publication:** 2014<br><br>**Abstract:** Indian agriculture is facing diverse challenges and constraints due to growing demographic pressure, increasing food and fodder needs, natural resource degradation and climate change. Agroforestry, which has traditionally been a way of life and livelihood in India for centuries, has a huge potential in ensuring that farmers enjoy a constant flow of income due to diversification of production. Agroforestry is a land use system in which woody perennials such as trees and shrubs are grown along with crops thus reducing dependency on one crop variety and increasing the farmers' livelihood opportunities.<br><br>**URL:** https://www.devalt.org/newsletter/dec14/of_4.htm |
|  | **Title:** Watershed Management helps convert Waste Land into Productive Land<br><br>**Author:** Sanghamitra Misra<br><br>**Year of Publication:** 2014<br><br>**Abstract:** In 2010, a watershed development project was sanctioned for the micro-watershed of Datia district under the Rajiv Gandhi Watershed Mission (RGWM). This programme involves setting up institutional mechanisms for community led watershed management, delivers solutions focusing on sustainable agriculture, efficient resource use, farmers' trainings for productivity enhancement and livelihood diversification<br><br>**URL:** https://www.devalt.org/newsletter/nov14/of_5.htm |

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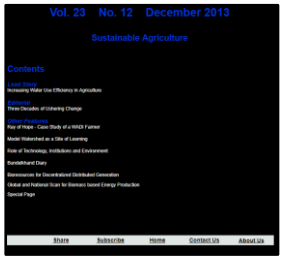
|  | **Title:** Enriching Biodiversity through Watershed Management<br>**Author:** Dr. Krishna Murari<br>**Year of Publication:** 2014<br>**Abstract:** Over the last 30 years, Development Alternatives has rejuvenated more than 25,000 hectares of land in Bundelkhand through its integrated soil and water conservation programmes. Construction of more than 150 water harvesting structures such as farm ponds, stop dams, gabion dams, check dams and loose boulders have helped increase groundwater levels in this drought prone region and has impacted growth in agriculture.<br>**URL:** https://www.devalt.org/newsletter/apr14/of_2.htm |
|  | **Title:** Sustainable Agriculture<br>**Authors**: Dr. Krishna Murari, Prince Vishal Swadeshi, Shiv Bhushan Pandey, Mayukh Hajra, Mahua Tripathy, Saumya Kumar<br>**Year of Publication:** 2013<br>**Keywords:** Sustainable, Agriculture<br>**Abstract:** In a situation of growing water scarcity and rising demands for non-agricultural uses of water, reassessment of sectoral allocations of water becomes inevitable. Water scarcity, which already affects one in three persons on earth, is set to increase in magnitude and scope as the global population grows and the increasing affluence drives up demand for water. The newsletter also focuses on watershed technologies and the use of bio resources.<br>**URL:** https://www.devalt.org/newsletter/dec13/dec13.htm |
|  | **Title:** Community Watershed Development: Rehabilitating Degraded Lands and Creating Sustainable Employment<br>**Author:** Dr. Krishna Murari<br>**Magazine:** Development Alternatives<br>**Year of Publication:** 2012<br>**Abstract:** The watershed development project possesses the potential to improve rural livelihoods through participatory efforts with a focus on integrated farming systems for enhancing income, productivity and livelihood security in a sustainable manner. This article describes the model in detail, highlighting its working and beneficiaries.<br>**URL:** http://www.devalt.org/newsletter/dec12/of_5.htm |

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|  | **Title:** Food and Livelihood Security through Development of Wadis<br><br>**Author:** Shiv Bhushan Pandey<br><br>**Year of Publication:** 2012<br><br>**Abstract:** The impact of climate change has crippled livelihoods of those who depend on natural resources for income and nutrition, rendering them vulnerable. This article highlights how WADI, agri-horti, agro-forestry and food processing models can help strengthen livelihoods. It focuses on the concept of WADI and Development Alternatives' interventions in it. It also goes on to highlight the role of community development and capacity building to ensure livelihood security.<br><br>**URL:** http://www.devalt.org/newsletter/dec12/of_3.htm |
|  | **Title:** Bundelkhand Harit Kisan Mandal: A Way Ahead for Climate-Resilient Growth<br><br>**Author:** Shaliendra Nath Pandey, Sonal Kulshreshtha<br><br>**Year of Publication:** 2012<br><br>**Abstract:** The Sustainable Civil Society Initiative (SCSI) Project of Development Alternatives aimed to improve the eco-security of rural communities by supporting and facilitating institutional mechanisms that enhance the capacities of these communities to adapt to climate variability. DA facilitated the development of Farmers' Adaptation Clusters based on low-carbon and resource-efficient agricultural practices.<br><br>**URL:** https://www.devalt.org/newsletter/dec12/of_1.htm |
|  | **Title** Water, Drought and Livelihoods in Bundelkhand<br><br>**Author:** Dr. Shailendra Nath Pandey, Dr. Naresh Sharma, Sonal Kulshreshtha, Dr. Naresh Sharma, Arobindo Mahato, Garima Chaturvedi, Arobindo Mahato, Garima Chaturvedi<br><br>**Year of Publication:** 2011<br><br>**Abstract:** This newsletter comprises various articles on the Bundelkhand region of India - its degrading natural resource base, low per capita income, increasing human pressures and extreme weather conditions of drought. It highlights various interventions of Development Alternatives to manage resources, protect the vulnerability of communities and climate and enhance their livelihoods. Some of these are: watershed development model, deep irrigation technology, farmers' adaptation cluster, resource efficient farming equipment, WADI model and oil expelling unit.<br><br>**URL:** http://www.devalt.org/newsletter/jan11/jan11.htm |

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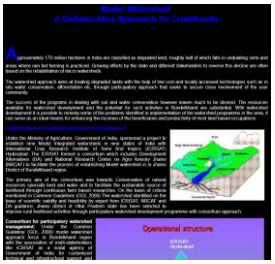
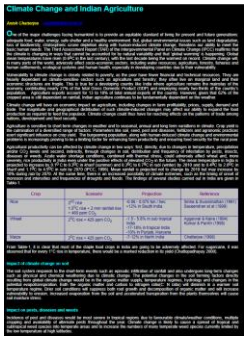
|  | **Title:** Model Watershed: A Collaborative Approach for Livelihoods<br>**Author:** S N Pandey and Naresh Sharma<br>**Year of Publication:** 2010<br>**Abstract:** This article discusses how the watershed approach has manifold benefits - reversing the extensive degradation of land, conserving natural resources, strengthening community and facilitating a sustainable source of enhanced livelihoods. It describes the processes of implementation, operation, monitoring, evaluation and scaling up of the Model Watershed to be established by Development Alternatives in the Bundelkhand region of Central India.<br>**URL:** http://www.devalt.org/newsletter/sep10/of_4.htm |
|  | **Title:** Organic Agriculture for Sustainable Development<br>**Author:** Dr. Shailendra Nath Pandey<br>**Year of Publication:** 2004<br>**Abstract:** This article focuses on organic agriculture and a system of food production and consumption that is appropriate for environmentally- and health-conscious people of the developed world. There are, however, other concerns that determine choices towards organic management. Conversion to organic agricultural systems are triggered by different objectives, such as: securing a place on international markets, export promotion, economic self-reliance, finding alternatives to decreased access to agricultural inputs, natural resource conservation, food self-sufficiency, and rural and wider social development.<br>**URL:** https://www.devalt.org/newsletter/jan04/of_4.htm |
|  | **Title:** Climate Change and Indian Agriculture<br>**Author:** Anish Chatterjee<br>**Year of Publication:** 2003<br>**Abstract:** This article discusses signals of climatic change that are already visible. Global climate change is going to affect major crops like rice, wheat, and maize in India. Climate is the least manageable of all resources. Hence, to avert the ill effects of climate change, more attention has to be paid to other resources and technologies viz. soil, irrigation water, nutrients, crops and their management practices, to sustain the productivity and to ensure food and environmental security to the country. Adaptive measures are to be taken in a timely fashion, both at the farmers' level (backed by strong agriculture/climate research and application oriented outputs) as well as at the policy makers' level |

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| | to enable the small and marginal farmers to cope with the adversities of climate change.<br>**URL:** https://www.devalt.org/newsletter/nov03/of_5.htm |
|  | **Title**: Watershed Approach : A Livelihood Option ?<br>**Author:** P S Chandrasekhra Rao<br>**Year of Publication:** 2001<br>**Abstract:** In recent years watershed management has increasingly become the focal point for poverty alleviation and drought mitigation particularly in rain fed areas of India. The article has attempted to examine the watershed approach in detail, both at the field/ground level as well as at the policy level and make suggestions for its adoption as a viable option for meeting the livelihood needs of the focus group, especially the vulnerable communities.<br>**URL:** https://www.devalt.org/newsletter/apr01/of_2.htm |

| **Audio Visuals** | |
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|  | **Title:** Agroforestry (English)<br>**Duration:** 4.44 mins<br>**Synopsis:** This film showcases agroforestry as a key adaptation strategy in drought ridden and climate sensitive regions such as Bundelkhand in Central India. It highlights the different sustainable agricultural initiatives that Development Alternatives is promoting to help farmers reduce their risk and diversify their income sources.<br>**URL:** https://www.youtube.com/watch?v=J3e-Uty5eGk |
|  | **Title**: Agroforestry (Hindi)<br>**Duration**: 5.00 mins<br>**Synopsis**: This film showcases agroforestry as a key adaptation strategy in drought ridden and climate sensitive regions such as Bundelkhand in Central India. It highlights the different sustainable agricultural initiatives that Development Alternatives is promoting to help farmers reduce their risk and diversify their income sources.<br>**URL:** https://www.youtube.com/watch?v=B6kdSDFnwbU |

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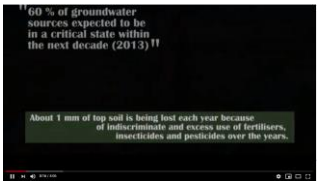
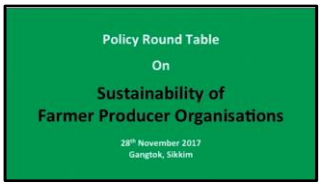
|  | **Title**: Nurturing Networks and Revitalising Rain-fed agriculture in Bundelkhand<br><br>**Duration**: 4.25 mins<br><br>**Synopsis**: Bundelkhand – a hilly region in the central and north India, has often been covered in the news for extreme distress and impoverishment. This film showcases a holistic approach which was adopted as part of an initiative to find agriculture solutions for small farmers in rain-fed regions of Bundelkhand. It explains the role of Revitalising Rain-fed Agriculture (RRA) network along with Development Alternatives, INTACH and PSI in working towards strengthening farmer based institutions to become a mediator for small holder and marginal farmers.<br><br>**URL:** https://www.youtube.com/watch?v=DUxUJoChBcA |
|  | **Title:** Solution to Farmer Woes - FPOs<br><br>**Duration:** 4.06 mins<br><br>**Synopsis:** This video brings to light the various challenges a smallholder farmer has to face--weather impacts, lack of access to market and information, water woes, unstable incomes, and so on. In this situation of crisis, the development of Farmer Producer Organisations (FPOS) shows a silver lining--not only in terms of sustainable agriculture, but also for doubling incomes and transforming the lives of farmers.<br><br>**URL**: https://www.youtube.com/watch?v=klD3omWceB8 |
|  | **Title:** Sustainability of Farmer Producer Organisations<br><br>**Duration:** 10.10 mins<br><br>**Synopsis:** A policy round table on 'Sustainability of Farmer Producer Organisations (FPOs)' was organised by Development Alternatives, to discuss how FPOs can enable supporting livelihoods & security of farmers, and environmental sustainability in agriculture. This video captures a few of the various insights gleaned on the challenges faced by small farmers in Sikkim, the current state of FPOs, and the opportunities and possible way forward for achieving the desired objectives.<br><br>**URL:** https://www.youtube.com/watch?v=6GQYB9NeGCk |

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|  | **Title:** Climate Resilient Farming (English)<br>**Duration:** 5:56 mins<br>**Synopsis:** With effects of climate change bearing down on the fragile region of Bundelkhand in Central India, farmers have to face a host of challenges. This film showcases DA's efforts in promoting sustainable agricultural techniques which are helping farmers adapt to the changing climate and increase their income levels.<br>**URL:** https://www.youtube.com/watch?v=k1W8lAZGJdg |
|  | **Title:** Climate Resilient Farming (Hindi)<br>**Duration:** 6:11 mins<br>**Synopsis:** With effects of climate change bearing down on the fragile region of Bundelkhand in Central India, farmers have to face a host of challenges. This film showcases Development Alternatives' efforts in promoting sustainable agricultural techniques which are helping farmers adapt to the changing climate and increase their income levels.<br>**URL:** https://www.youtube.com/watch?v=C34k9-vhit0 |
|  | **Title:** Capacity Building<br>**Duration:** 5.50 mins<br>**Synopsis**: DA has been leading the Shubh Kal campaign for climate change communication in more than 400 villages of Bundelkhand, one of the most climate sensitive regions of India. This film showcases the process of capacity building of community radio reporters in climate change journalism to serve as a link between people, scientists and policy makers.<br>**URL**: https://www.youtube.com/watch?v=0KdtMZBr_gk |
|  | **Title**: Climate Change FM (English)<br>**Duration:** 5:16 mins<br>**Synopsis**: This film showcases the role of Community Radio reporters in strengthening community knowledge and voice on climate change risks and adaptation measures on one hand, and increasing awareness of the scientific community, local government authorities and policy makers on the impact of climate change on local development, on the other hand.<br>**URL**: https://www.youtube.com/watch?v=EavwEHpEhpY |

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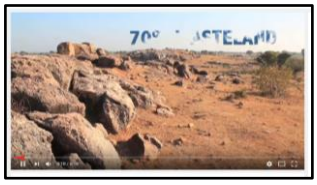
|  | **Title:** Climate Change FM (Hindi)<br>**Duration**: 5:16 mins<br>**Synopsis**: This film showcases the role of Community Radio reporters in strengthening community knowledge and voice on climate change risks and adaptation measures on one hand, and increasing awareness of the scientific community, local government authorities and policy makers on the impact of climate change on local development, on the other hand.<br>**URL:** https://www.youtube.com/watch?v=YRVc1OT2qEI |
|  | **Title:** Natural Resource Management (English)<br>**Duration:** 6:16 mins<br>**Synopsis:** This film highlights the various solutions that DA offers under its Natural Resource Management Programme in the drought prone and climate sensitive region of Bundelkhand, Central India. These eco-solutions are helping in the sustainable management of natural resources for achieving food and livelihood security of the rural communities in the face of change.<br>**URL :** https://www.youtube.com/watch?v=MyaonS2pOSI |
|  | **Title**: Watershed Management (English)<br>**Duration:** 5:28 mins<br>**Year of Production**: 2013<br>**Synopsis:** This film showcases the watershed management programmes implemented by DA in the semi-arid and drought prone region of Bundelkhand in Central India. These programmes have helped prevent soil run-off, regenerate natural vegetation, harvest rainwater and recharge groundwater, creating sustainable livelihoods for rural communities.<br>**URL:** https://www.youtube.com/watch?v=aVPXm6Gc9JQ |

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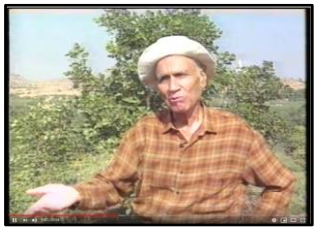
|  | **Title**: Watershed (Hindi)<br>**Duration:** 5:41<br>**Synopsis:** This film showcases the watershed management programmes implemented by DA in the semi-arid and drought prone region of Bundelkhand in Central India. These programmes have helped prevent soil run-off, regenerate natural vegetation, harvest rainwater and recharge groundwater, creating sustainable livelihoods for rural communities.<br>**URL:** https://www.youtube.com/watch?v=ZzLF9lQ4ocw |
|  | **Title:** Roots of Datia<br>**Duration:** 20:54 mins<br>**Synopsis:** More than half a century ago, Datia, a district in Bundelkhand was full of lush green forest and wild animals. But the forest disappeared due to several reasons and the love of people for forest remains in people's memories and in the folk songs of the region. This film is about how two barren hillocks transformed into a green forest by the effort of a wizard named retired Air Vice Marshal S Sahni, who is fondly called AVM by his colleagues in Development Alternatives, an NGO working towards sustainable development.<br>**URL:** https://www.youtube.com/watch?v=SKcw6f3scE8 |
|  | **Title:** A film for Development Alternatives on their work with farmers in Central India<br>**Duration:** 5.18 mins<br>**Synopsis:** A 5 minute film for Development Alternatives on their work with farmers in Bundelkhand region of Madhya Pradesh in Central India. This film highlights some innovative techniques used by DA to transform the lives of farmers and create a foundation for a sustainable future.<br>**URL:** https://www.youtube.com/watch?v=ia_sKSg2_Os |

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|  | **Title:** TARAurja - Farmer<br>**Duration:** 2.47 mins<br>**Synopsis:** Due to erratic supply of electricity, people have not been able to reach their full entrepreneurial potential. This is a success story of a farmer whose life was impacted positively by the constant flow of electricity through the TARAurja Initiative. With uninterrupted electricity, proper irrigation can be supplied to the crops for a better output. This initiative also helped him to buy irrigation pumps. The initiative saved him time, money and labour<br>**URL:** https://www.youtube.com/watch?v=W_qNccfisJ4 |
|  | **Title:** Climate Change Radio Jingles - Development Alternatives<br>**Duration:** 1.02 mins<br>**Synopsis:** These Radio jingles have been broadcast on radio Bundelkhand, the first Community Radio in Central India. Radio Bundelkhand is an initiative of Development Alternatives. These jingles promote the concept of preserving nature for a better tomorrow, afforestation & climate change adaptation at an individual level.<br>**URL:** https://www.youtube.com/watch?v=DcM2xWOsMYU |

## About Development Alternatives Group

Development Alternatives (DA) is a premier social enterprise with a global presence in the fields of green economic development, social equity and environmental management. It is credited with numerous technology and delivery system innovations that help create sustainable livelihoods in the developing world. DA focuses on empowering communities through strengthening people's institutions and facilitating their access to basic needs; enabling economic opportunities through skill development for green jobs and enterprise creation; and promoting low carbon pathways for development through natural resource management models and clean technology solutions.

Development Alternatives

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