

# Index

## A

Aboveground biomass, 45, 64, 101, 114, 129  
Access, 2  
Access to public goods and services, 130  
Access to resources, ix  
Accountability, 4, 130  
Active cooperation, 51  
Active participation, 51, 138  
Adaptive co-management, 52  
Adaptive management, 52  
Additional forest carbon, 164  
Additional income, 145  
Adoption, ix, 131  
Afforestation, viii, 17, 25  
Africa, 5  
Agricultural crops, 136, 143, 149, 156  
Agricultural intensification, 128  
Agricultural production, 128  
Agricultural systems, 126  
Agriculture, 134, 155  
Agri-horti-silvicultural, ix, 125, 140, 142  
Agroforestry, ix, 10, 21, 127, 156, 157  
Agroforestry development, ix, 10, 125, 139, 149  
Agroforestry model, 161, 128, 129  
Agroforestry plots, 133  
Agroforestry products, 156  
Agroforestry systems, 129, 140, 149  
Alleviating poverty, 4  
Alley cropping, v  
Alternative approach, 5  
Alternative farming system, 127  
Alternative income generation, 1, 8, 85, 110, 118, 161, 163  
Alternative income opportunities, 164  
Alternative income sources, 165

Alternative land uses, 129  
Arannayk Foundation, vi, 105, 164  
Asia, 5, 6  
Asian Development Bank, v  
Asian elephant, 58  
Asia-Pacific, 6  
Autonomy, 5

## B

Bamboo flowering, 110  
Bamboo shoot, 105  
Bangladesh, v, vii, x, 1, 7, 165  
Bangladesh Agricultural Research Council, 131  
Bangladesh forest, 9  
Bangladesh Forest Research Institute, v  
Basal area, 45, 114, 157  
Baseline, 60  
Baseline survey, 49  
Belize, 126  
Benefit–cost analysis, 145  
Benefit–cost ratio, ix, 125, 133, 145  
Benefits, 143  
Benefit-sharing, 8, 20, 140  
Benefit-sharing agreements, 21  
Betagi, 31  
Betagi–Pomra, v  
Betagi–Pomra community forestry, viii, 9, 25, 58, 62  
Betel leaf, viii, 58, 62, 73  
Biocultural system, 115  
Biodiversity, 18, 115, 129, 161  
Biodiversity conservation, 55, 91, 118, 163  
Biomass, viii, 45, 49, 157  
Biophysical, 2  
Boundary demarcation, 34

- British colonial era, 7, 9, 19  
 British colonial period, 7, 104  
 Buffer zone, 75
- C**
- Canopy coverage, 63  
 Capability, 5  
 Capacity building, 164  
 Carbon credits, 164  
 Carbon forestry, 1, 8  
 Carbon measurements, 164  
 Carbon sink, 45  
 Carbon storage, 163, 164  
 Central government, 3  
 Centrally managed, 2  
 Chakma community, 104  
 Challenges, 4, 10, 134  
 Chittagong, 29  
 Chittagong Hill Tracts (CHTs), ix, 9, 10, 22, 101, 125, 138, 158  
 Chittagong Hill Tracts Development Board, 162  
 CHT Peace Accord, ix, 101, 117  
 CHT Regulation, 104  
 Chunati reserve forest, 58  
 Chunati Wildlife Sanctuary, viii, 10, 49, 58  
 Circular plots, 63  
 Citizens' participation, 2  
 Civil society, 4  
 Climate change, 1, 163  
 Climate change mitigation, 8, 166  
 Climate Resilient Eco-System and Livelihood (CREL), vi  
 Climate Resilient Participatory Afforestation and Reforestation Project, 165  
 Cobenefits, 163  
 Co-centric plots, 63  
 Coffee, 128  
 Colearning, 148  
 Collaboration, x, 52, 125, 162, 166  
 Collaborative action, 50  
 Collaborative governance, 81  
 Collaborative management, 52  
 Collective, 2  
 Collective action, 52  
 Collectively, 4  
 Collective resource management, 7  
 Colonial foresters, 7  
 Colonial legacy, 7  
 Colonial rule, 7  
 Co-management, vi, 3, 7, 8, 10, 49, 92, 160–162  
 Co-management committee, viii, 49, 159, 163  
 Co-management Council, 56  
 Co-management functions, 92  
 Co-management governance, viii, 49  
 Co-management model, 58  
 Co-management structure, viii, 162  
 Commercial, 7  
 Commercial production, viii  
 Committee, 35, 111, 138  
 Common land, 104  
 Common property, 102, 103, 115  
 Communal authority, 8  
 Communal forest management, 8  
 Communal land rights, 111  
 Communal management, 102  
 Communal ownership, 161  
 Community, v, 7, 162  
 Community-based agroforestry development, 127  
 Community-based approach, 6  
 Community-based forest conservation, vi  
 Community-based forest management (CBFM), vii, 1, 4, 6, 21  
 Community-based organizations, 131  
 Community-based participatory approach, 138  
 Community-conserved areas, vi  
 Community development, 58, 165  
 Community-driven forest management, 102  
 Community forest management, v, 160  
 Community forestry, v, 4, 5, 7, 8, 17, 21  
 Community management, 160  
 Community ownership, 163  
 Community participation, ix, 31, 125, 130  
 Community patrol groups, vi, viii, 49  
 Complex agroforests, 129  
 Concentric, 106  
 Conflicts, 2, 159  
 Conservation, 1, 17  
 Constraints, 147  
 Construction materials, 161  
 Continuous interactions, 141  
 Continuous monitoring, 141  
 Conventional forest management, 8  
 Cooking, 38  
 Coordination, 160, 163  
 Core zone, 75  
 Corporate agencies, x, 10, 165, 166  
 Corporate social responsibility, 1, 8  
 Corruption, 26  
 Crop combination, x, 125, 140  
 Cropping system, 126, 128  
 Crop productivity, 149  
 Crop varieties, 145  
 Cultivation, 143  
 Customary institutions, 162  
 Customary land ownership, 160

Customary practice, 103  
 Customary resource rights, 118

## D

Decentralization, 2–4, 7  
 Decentralized, 2  
 Decentralized conservation, 4  
 Decentralized forest governance, 4  
 Decimal, 134  
 Decision-making, 3–5, 162  
 Deforestation, viii, 2, 7, 10, 17, 18, 127  
 Degradation, 2, 7  
 Degradation of forests, 10  
 Degraded forest, viii, 31  
 Delegate, 163  
 Delegation, 3  
 Deliberation, 52  
 Democracy, 4  
 Democratic participation, 2  
 Density, viii  
 Dependency, vii  
 Deutsche Gesellschaft für Internationale  
 Zusammenarbeit (GIZ) GmbH, viii, x, 59  
 Development, ix  
 Devolution, 3  
 DFID's sustainable livelihood framework, viii  
 Diameter at breast height, viii, 31, 49, 63  
 Diameter class distribution, 79  
 Diffusion, 131  
 Dissemination, 131  
 Distrust, viii  
 Disturbance index, 64, 79  
 Diversification, 128  
 Diversity indices, 114

## E

Ecological, 2, 4  
 Ecological benefits, 103  
 Ecological degradation, 21  
 Economic, 155  
 Economic alternatives, 26  
 Eco-parks, 53  
 Ecosystem management, 56  
 Ecosystem services, 156  
 Effective collaboration, 51  
 Effective community participation, ix  
 Effective implementation, 141  
 Effectiveness, 10, 163  
 Efficiency, 4, 163  
 Efficient, 5  
 Efficient management, 5  
 Elite capture, 159  
 Elite influences, 159  
 Empowerment, 131

Encroachment, 8, 17, 18, 58  
 Enforcement, 4  
 Engagement, 160  
 Enrichment plantations, 79  
 Environmental, 2  
 Environmental conservation, 1, 3, 8, 50, 165  
 Environmental degradation, 118, 128  
 Environmental enrichment, 138  
 Environmental improvement, 139  
 Environmental policy, 130  
 Environmental risks, 129  
 Environmental services, 159, 161  
 Equal access, 160  
 Equal share, 160  
 Equitable access, 159  
 Equity, 4, 160, 163  
 Ethnic communities, ix  
*Eucalyptus camaldulensis*, v  
 Evaluate, vii  
 Evenness index, 79  
 Evergreen forests, 58  
 Evolution, 1  
 Evolution of CBFM, viii  
 Executive committee, vi  
 Exclusion, 2  
 Exotic species, viii, 49  
 Exploitation, 138  
 Expropriation, 2  
 External support, 159

## F

Fair, 4  
 Fairness, 3, 52  
 Fallow period, 126, 127, 149  
 Farming practices, 133, 134, 149  
 Farm productivity, 134  
 Fast-growing, 155  
 Fast-growing plantation, 58  
 Feedback learning, 51  
 Field trainings, 149  
 Final evaluation, 60  
 Financial contribution, 165  
 Floristic composition, 106  
 Focus group discussions, 60, 61  
 Food insecurity, 149  
 Food scarcity, 149  
 Food security, 128, 129  
 Food shortage, 126, 149  
 Foreign remittance, 40  
 Forest Act, 20, 53  
 Forest Act 1927, 104  
 Forest attributes, ix  
 Forest commons, 102  
 Forest conservation, 49

- Forest degradation, 8, 10
- Forest Department, v
- Forest-dependent, 2, 8, 10, 18
- Forest-dependent communities, 103
- Foresters, 5, 7
- Forest development committee, 163
- Forest governance, vii, 2, 4, 5, 163
- Forest health, ix, 5, 49, 101, 105
- Forest health conditions, viii
- Forest law, 20
- Forest management, 1
- Forest Policy, viii, 9, 17
- Forest protection, 8
- Forest reserves, 22
- Forestry sector, 26
- Forests, 1–0
- Forest structure, 91
- Forest trail, 49
- Forest user, 5
- Forest user groups, 7
- Forest vegetation, viii
- Formation of rules, 159
- Four-tier governance, 82
- Fragile environment, 130
- Fragmentation, 10, 29, 48, 161
- Fruit garden, 131
- Fruit-tree-based agroforestry, 129
- Fuelwood, ix, 129, 156
- Fundamental instrument, 7
  
- G**
- Game reserves, 53
- Goals of CF, viii
- Good governance, 5, 52, 102, 163
- Governance, 3, 4, 17, 21, 26, 113, 158
- Governance of protected areas, vi
- Grameen bank, 32
- Group discussions, 133
  
- H**
- Habitats, 5
- Hands-on knowledge, 149
- Harvest, 107
- Harvesting, 33
- Harvests, 159
- Herbarium, 106
- Heterogeneity, 160
- Heterogeneous, 159
- High dependency, 159
- Hill Flower, 138
- Hill forests, 10
- Holistic participatory approach, 10
- Homestead agroforestry, 131
- Homestead forest, 134
  
- Homogeneous user groups, 160
- Homogenous, 159
- Horticultural, 32
- Horticultural crops, 136
- Household consumption, 161
- Household survey, 31
- Human capital, 47
  
- I**
- Illegal cutting, 18, 111
- Illegal felling, 90
- Illegal logging, ix, 10, 49
- Illegally, 158
- Illicit felling, 110
- Implementation, 5
- Importance value index, 76
- Impoverished, 5
- Improved cooking stove, 85, 156
- Incentive-based approach, 146
- Incentives, 34
- Income generation, 140
- Index of dominance, 64, 79
- India, 7
- Indigenous, 3, 9
- Indigenous communities, 10, 162
- Indigenous economy, 126
- Indigenous knowledge, 140
- Indigenous management, ix, 101, 105
- Indigenous people, ix, 101, 156, 158
- Individual ownership, 10
- Individual tenure, 158
- Informal indigenous rules, ix
- Informal school, 34
- Information flow, 131
- Innovation, 131
- Innovative, 1, 4
- Input cost, 136
- Institute of Forestry and Environmental Sciences, x, 131
- Institutional, 162
- Institutional framework, 162
- Institutional innovation, 7
- Institutional support, 161
- Integrated management, 5
- Integrated Protected Area Co-management (IPAC), vi, 25, 49
- Intensification, 129
- Interactions, 139
- Irrigated agriculture, 131, 155
  
- J**
- Jhum, 127, 131, 134, 136
- Jhumias, 127
- Joint decision making, 50

Joint families, 37  
 Joint forest management, 4, 7

## K

Kaptai, 131  
 Karbari, 141  
 Key-informants, 31  
 Khas land, 31  
 Komalchari, ix, 101

## L

Land allocation, 6  
 Land degradation, 136, 149  
 Land fragmentation, 162  
 Landholding, 41, 134  
 Land ownership, 10  
 Land tenure, 2, 10, 158  
 Land tenure conflicts, 160  
 Land tenureship, 161  
 Land use conflicts, 10  
 Land-use system, 128  
 Latin America, 5  
 Lease, 158  
 Legal classification, 103  
 Legal documents, 158  
 Legal instrument, 161, 162  
 Legal issues, 158  
 Legal pluralism, 158  
 Legislation, 1, 2, 4, 5, 8–10  
 Livelihood, viii, 2–5, 7, 8–10, 45, 126, 139  
 Livelihood assets, 47  
 Livelihood capitals, viii, 29, 31, 48  
 Livelihood improvement, 56, 61, 90  
 Livelihoods benefits, 163  
 Livelihood support, 107  
 Livestock, 134  
 Living standards, 145  
 Local community, 1, 7  
 Local control, 5  
 Local governance, 163  
 Local institutions, 51  
 Local participation, 125  
 Long-term sustainability, 129

## M

Management plans, 8  
 Management rights, x, 10  
 Marginal lands, 20  
 Market competition, 140  
 Market economy, 10  
 Market potential, 140  
 Mauza reserves, 104  
 Mayan ethnic people, 126  
 Medicinal plants, ix

Monitoring, 4, 5, 141  
 Monitoring, reporting, and verifying (MRV), 164  
 Monoculture, 126, 128, 131  
 Mono plantations, 53  
 Motivation, 148  
 Multi-level forest governance, 4  
 Multiple use, 140  
 Multi-stakeholder, 50  
 Multi-story production system, 145  
 Mutual rotating fund, x, 1, 8, 10  
 Mutual Rotating Savings and Loan Funds, 164

## N

National forest policy, 8  
 National parks, 53  
 Natural disaster, 17, 34  
 Natural regeneration, 157  
 Natural resource management, vii, 50, 129, 138  
 Nepal, 7  
 Net benefit, 145  
 Networks, 51, 138, 141  
 Nishorgo project, vi  
 Nishorgo Support Project, 49  
 Non-carbon benefits, 164  
 Non-farm activities, 127  
 Norms, 7  
 Northern Bangladesh, v  
 Nucleus family, 161  
 Nutrient loss, 136

## O

Old forest growth, ix  
 Opportunity, 1, 8, 10, 134  
 Opportunity costs, 161  
 Original legacy, 10  
 Overexploitation, 2, 4  
 Ownership, vi, x, 5, 18, 130, 162

## P

Participants, viii  
 Participation, 1, 3, 8, 129, 160  
 Participatory, 2, 7  
 Participatory Benefit Sharing Agreements, 20, 24  
 Participatory forest governance, 164  
 Participatory forest management, 6, 8, 60  
 Participatory forestry, 4, 8, 18, 21  
 Participatory governance, 82  
 Participatory management, 18  
 Participatory methods, 129  
 Participatory model, 20  
 Participatory research methods, 130  
 Participatory rural appraisal, 125, 133

- Participatory scoring, 133, 140
  - Partnership, 51, 131, 160–162
  - People-centered, 5
  - People-centered approach, 160
  - People-centric model, viii, 17
  - People-oriented, 2
  - Peoples' forums, viii, 49
  - Perception, 146
  - Performance, vii, 141
  - Performance of agroforestry, 134
  - Personal observation, 133
  - Physical capital, 47
  - Plantation, viii, 8, 131, 157, 165
  - Plant species, ix
  - Plant species composition, 136
  - Pluralist approach, 50
  - Pluralistic, 4
  - Policies, 1
  - Policy, 4, 8, 18
  - Policy environment, 51
  - Policy frameworks, 2
  - Policy implications, ix, 29, 162
  - Policy intervention, 5, 162
  - Policy making, 130
  - Policy recommendations, 138
  - Polycentric, 2
  - Pomra, 31
  - Population, 2
  - Population growth, 29
  - Population pressure, ix, 129
  - Positive changes, viii
  - Poverty, 1, 2, 17, 129
  - Poverty alleviation, 5, 138
  - Poverty reduction, 8, 21, 23
  - Power, 2, 4, 50
  - Power sharing, 50
  - Power shift, 5
  - Preference, ix, 133, 140
  - Primary occupation, 134
  - Priority species, 140
  - Privatization, 117
  - Productivity, 136
  - Professor Alim, 35
  - Profitability, 128, 129, 140
  - Project authority, 132
  - Project beneficiaries, 148
  - Project investigators, 140
  - Promotion, ix
  - PROSHIKA, 110
  - Protected area co-management, 160
  - Protected area management, 10
  - Protected areas, vi
  - Protected forest, 31
  - Public awareness, 4
  - Public forests, 101
  - Public participation, 8, 130
- Q**
- Qualitative, 31
  - Quantitative, 31
  - Quddus Master, 31
- R**
- Rain-fed, 155
  - Rangamati, 131
  - Rangunia, 29
  - Rat flooding, 112
  - Reciprocal partnerships, 130
  - Reciprocity, 51
  - REDD+, x, 10, 29, 45
  - REDD+ projects, 163
  - REDD+ schemes, 163
  - Reduce poverty, 5
  - Reducing emissions from deforestation and forest degradation, 163
  - Reforestation, viii, 17
  - Regeneration, 63, 80, 114
  - Regulations, 4
  - Regulatory policies, 26
  - Rehabilitation, 22
  - Reserve forests, vi, 102
  - Resource system, 155
  - Restoration of forests, 164
  - Revenue, 26
  - Rickshaw, 40
  - Root crops, 149
  - Rotation, v, 18
  - Rotational cropping, 147
  - Rubber, 128
  - Rule formation, 158
  - Rules, 2, 4
  - Rules of access, 5
  - Rural development, 130
  - Rural livelihood, 160
  - Rural poverty, 7
- S**
- Sal (*Shorea robusta*), v
  - Sanctions, 104
  - Scientific forest management, viii
  - Secondary (natural) forests, 157
  - Secondary forests, 161
  - Seedlings, ix
  - Self-help, 148
  - Semi-structured, 133
  - Semi-structured questionnaire, 133, 106
  - Settlement project, 31
  - Shannon–Wiener diversity index, 64

- Shannon–Wiener index, 79  
 Sharing authority, vi  
 Shawnirvar, 31  
 Shifting cultivation, 103, 125, 126, 155–157, 161  
 Sime Darby, 165  
 Sitapahar, 19  
 Slash-and-burn, 126  
 Small groups, 147  
 Small resource system, 10  
 Small-scale, 8  
 Small-scale credit program, 165  
 Social aspects, 140  
 Social capital, 10, 47, 51, 138  
 Social development, 1, 165  
 Social–ecological, 52  
 Social equality, x, 10  
 Social Forestry Rules, viii, 4, 8, 17, 20, 21, 85  
 Social organization, 35  
 Social relationship, 50, 51  
 Social sciences, 129  
 Social trust, 52  
 Socioeconomic, 4, 126  
 Soil erosion, 136, 138, 140, 161  
 Soil fertility, 136, 161  
 Solar energy, 38  
 South, 7  
 South and Southeast Asia, 6  
 South Asia, 7  
 Southeast Asian, 7  
 Southeastern part of Bangladesh, x  
 Species diversity index, 64  
 Species richness, 64  
 Species richness index, 79  
 Stakeholder’s participation, 130, 149  
 Stakeholders, 2  
 Standard of living, 5  
 State–community forest management, 5  
 State–community partnership, 160  
 Strength, vi  
 Strict restriction, 2  
 Strip plantations, 22  
 Subsistence, 20  
 Subsistence farming, 126  
 Subsistence farming system, 129  
 Subtropical, 10  
 Sundarbans, 22  
 Sungrass, viii  
 Survival rate, ix  
 Sustainability, ix, 1, 4, 5, 8, 10, 125, 160  
 Sustainability of agroforestry, 127, 134  
 Sustainability of co-management, 160  
 Sustainable, 8  
 Sustainable development, 129, 130, 165  
 Sustainable forest management, vii, 128  
 Sustainable intensification, 128, 149  
 Sustainable intensification of agroecosystems, 128  
 Sustainable land uses, 138  
 Sustainable livelihood framework, 29, 30  
 Sustainable livelihoods, 4, 129  
 Sustainable management, 10  
 Swidden, 129  
 Swidden commons, 102  
 Swidden cultivation, 101  
 SWOT, 29  
 SWOT analysis, 45
- T**  
 Teak, 22, 37  
 Teak plantation, 19  
 Technical support, 161, 162  
 Tenure, ix, 101  
 Tenure insecurity, 104  
 Top-down, 2, 17  
 Top-down approach, vii  
 Total productivity, 129  
 Traditional agroforestry, 134, 136  
 Traditional forest management, vi  
 Traditional knowledge, 2, 104  
 Traditional norms, 4  
 Traditional rights, 8, 21  
 Transaction costs, 164  
 Transparency, 21, 130  
 Transparent, 4  
 Tree density, 155  
 Tree diversity, 157  
 Tree Farming Fund, 25  
 Tribal people, 147  
 Triple benefits, 1, 8  
 Tripura, 105  
 Tropical countries, vii  
 Tropical forest conservation, 164  
 Tropical forests, 18  
 Trust, 4, 7, 51, 125, 138, 147
- U**  
 Unclassed state forests, 115  
 University of Chittagong, x, 125, 131  
 University of Tokyo, x  
 User groups, 159
- V**  
 Vegetable farming, 164  
 Vegetation, ix, 41  
 Vegetation survey, 49

Village common forest (VCF), ix, 22, 101, 102, 156

Village conservation forums, viii, 49

## W

Wagga, 131

Watershed, 7

Watershed protection, 128

Water supply, 156

Weakness, vi

Well-being, 4, 5

Well-defined boundary, x, 10

Wildlife, 161

Wildlife Act, 56

Wildlife sanctuaries, 53

Wildlife & Nature Conservation Division, x

Willingness to join, 148

Win-win approach, 165

Win-win situation, 164

Woodlot plantations, 22

## Y

Yield, 143