

| FORMAT | | |
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| 1. Name of resource | Community Seed Banks | |
| 2. Location | https://www.researchgate.net/publication/316475801_Ronnie_Vernooy_Bhuwon_Sthapit_Gloria_Otieno_Pitambar_Shrestha_Arnab_Gupta_2017_The_roles_of_community_seed_banks_in_climate_change_adaption_Development_in_Practice_273316-327_httpdxdoiorg1010800961452 | |
| 3. Alternative location | | |
| 4. Author[s] | R. Vernooy, P. Shrestha and B. Sthapit | |
| 5. Publisher/producer/host | Routledge (Earthscan) | |
| 6. Year | 2015 | |
| 7. Suggested citation | Vernooy, R., Shrestha, P. and B. Sthapit (2015). Community Seed Banks. Routledge (Earthscan), Abingdon. | |
| 8. Languages in which available | English | |
| 9. Geographic area resource relates to | Global | |
| 10. Does the resource relate to a specific time frame? | | |
| 11. Type | Report | Yes |
| | Toolkit/Framework/Roadmap | |
| | Sign-post to other resource (database) | |
| | Case studies | Yes |
| | Other | |
| 12. If this is part of an initiative, what is the initiative? | | |
| COLLECTIONS AND COLLECTIONS-BASED INSTITUTIONS | | |
| 13. Explicit links to collections | Yes | |
| 14. Explicit links to museums/libraries/archives | No | |
| 15. Types of institutions the resource covers | Museums | |
| | Archives | |
| | Libraries | |
| | Other | X |
| 16. Does the resource relate to specific disciplines? | Arts, humanities and social sciences: philosophy, psychology, religion, social sciences, law, politics, language, arts and recreation, architecture, literature, history, | |

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| | geography and ethnology, anthropology, archaeology | |
| | Science, natural history, technology, medicine, engineering, manufacturing | X |
| 17. If no explicit links to collections, justification for inclusion | The resource provides an exploration of many aspects of community seed banks, that relate to seed banks and gene banks, and also to seed archiving for food security and resilient agriculture. | |
| HOW IT CONTRIBUTES TO SUSTAINABLE DEVELOPMENT | | |
| 18. Collections-related activities the resource relates to (mark all that apply) | | |
| Develop collections to protect and safeguard wider cultural and natural heritage more effectively , for example by targeting collecting to threatened forms of heritage in strategic ways | X | |
| Use collections to promote learning and educational opportunities that contribute to sustainable development more effectively , for example education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development and/or skills development relating to collections | | |
| Use collections to promote cultural participation/social inclusion more effectively , for example by reducing barriers to participation, to ensure no-one is 'left behind' | X | |
| Use collections to promote sustainable tourism more effectively , for example by developing new products based on local cultural heritage, and/or considering the rights of stakeholder groups in relation to collections | | |
| Use collections to support research that contributes to sustainable development (including all forms of personal and self-directed research at all levels that make use of stored collections) more effectively, for example by providing effective facilities, collections and information to meet researchers' needs | X | |
| Make decisions around collections that contribute to sustainable development more effectively | | |
| i. employment (recruiting, staff training, staff safety) | | |
| ii. energy consumption, greenhouse gas emissions, reduction, monitoring and reporting | | |
| iii. waste management and reduction of waste | | |
| iv. transport (forms of transport, energy use) | | |
| v. commercial activities including copyright and IP | | |
| vi. governance and management | | |
| vii. security, disaster preparedness and risk reduction | | |
| Direct external leadership, partnerships and collaborations towards sustainable development more effectively , for example | | |

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| by developing impactful partnerships | |
| 19. Does the resource relate clearly to any international conventions (mark all that apply)? | |
| Culture conventions: | |
| 1952, 71 Protection of Copyright and Neighbouring Rights | |
| 1954 Protection of Cultural Property in the Event of Armed Conflict | |
| 1970 Fighting Against the Illicit Trafficking of Cultural Property | |
| 1972 Protection of the World Cultural and Natural Heritage | |
| 2001 Protection of the Underwater Cultural Heritage | |
| 2003 Safeguarding of the Intangible Cultural Heritage | |
| 2005 Protection and Promotion of the Diversity of Cultural Expressions | |
| Rio Conventions: | |
| Convention on Biological Diversity (CBD), Convention to Combat Desertification (UNCCD), Framework Convention on Climate Change (UNFCCC) | X |
| AIMS AND CONTENT | |
| 20. What issues does the resource aim to address? | “Community level seed-saving initiatives have been around for about 30 years. They have been designed and implemented to conserve, restore, revitalize, strengthen and improve local seed systems, especially, but not solely, focused on local varieties... This book aims to fill a gap in the scientific literature about community seed banks. Despite 30 years of existence and growth, no book has been published that reviews their history, evolution, experiences, successes, challenges and prospects. We believe this book is unique in bringing together a rich compilation of 35 diverse case studies from around the world and an in-depth comparative analysis of the key aspects of the operations and viability of community seed banks.” (p.2) |
| 21. Intended audience of resource | [People working with community seed banks in various ways] |
| 22. Process of development | Authored book largely consisting of case studies |
| 23. Organisation/structure/contents | 1. The rich but little known chronicles of community seed banks Part I Comparative analysis of key aspects of community seed banks 2. Origins and evolution 3. Functions and activities 4. Governance and management 5. Technical issues 6. Support and networking 7. Policy and legal environment 8. Sustainability Part II Case studies from around the world |

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| | [35 case studies] Epilogue |
| FRAMEWORKS | |
| 24. Framework structure | |
| 25. Relevant policy considerations | Yes |
| 26. Resources for implementation identified | Yes |
| 27. Specific assessment points/indicators/milestones/action plan for monitoring | Yes |
| 28. ASPECTS OF SUSTAINABILITY COVERED BY RESOURCE (mark all that apply) | |
| People (social sustainability) | X |
| Planet (environmental sustainability) | X |
| Prosperity (economic sustainability) | X |
| Peace | X |
| Partnerships | X |
| 29. CROSS-CUTTING CONSIDERATIONS COVERED BY RESOURCE (mark all that apply) | |
| Gender perspectives | |
| North and South perspectives | |
| HOW THE RESOURCE CONTRIBUTES TO AGENDA 2030 AND THE SDGs | |
| HOW AGENDA 2030 AND THE SDGs FEATURE IN THE RESOURCE | |
| 30. SDGs and Agenda 2030 specifically mentioned? | No |
| 31. SDGs specifically mentioned? | No |
| 32. SDG targets specifically mentioned? | No |
| 33. SDG indicators specifically mentioned? | No |
| SDGs AND SDG TARGETS AND LINKAGES | |
| 34. Comments on SDG linkages | The resource is linked to SDGs 2.3 (sustainable agriculture and productivity), 2.4 and 2.5 (addressing hunger and preservation of food resources), 9.1 and 9.5 (addressing sustainable infrastructure and scientific research), and 13.B (building resilience in least developed countries and |

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| | <p>developing island states). This in turn supports a number of SDGs relating to food and food security, vulnerability and resilience, including 1.5, 2.1, 2.2 and 11.5. Adapting to climate change supports SDG 13.1 and 13.3.</p> <p>Protecting genetic diversity and biodiversity contributes to SDGs 11.4 and 15.5.</p> <p>Ensuring benefits arising from genetic resources are shared equitably with source communities contributes to SDGs 2.5 and 15.6.</p> |
| 35. SDGs and SDG targets the resource helps advance | |
| <p>SDG 1: End poverty in all its forms everywhere 1.5 By 2030, build resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.</p> | <p>Number of collecting programmes that aim to build resilience to climate-related events and other shocks and disasters, for example by forming collections that can contribute to related educational and research programmes.</p> <p>Number of educational programmes drawing on collections that incorporate resilience perspectives.</p> <p>Number of targeted programmes drawing on collections that are aimed at vulnerable groups, to build their resilience to climate-related and other shocks and disasters.</p> <p>Number of research programmes drawing on collections that are aimed at building resilience to climate-related and other shocks and disasters.</p> <p><i>Strengthen the resilience of employees, communities and suppliers by paying at a minimum the living wage and offering insurance to employees and their families, such as accident insurance; and by paying fair prices to all suppliers</i></p> |
| <p>SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture 2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe,</p> | <p>Number of educational programmes incorporating food security, nutrition and seasonal diet perspectives.</p> <p>Collections development related to food security, nutrition and seasonal diets, as appropriate</p> <p>Number of targeted educational, awareness-raising and partnership programmes relating to food and nutrition, drawing on collections, aimed at vulnerable and</p> |

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| <p>nutritious and sufficient food all year round</p> | <p>marginalized groups.</p> <p>Number of research activities drawing on collections that relate to resilient agricultural practices, helping mitigate and adapt to climate change, flooding and other disasters.</p> |
| <p>SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture 2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons</p> | <p>Number of educational programmes incorporating health and food perspectives.</p> <p>Collections development related to malnutrition and nutrition, where appropriate.</p> <p>Number of targeted educational, awareness-raising and partnership programmes relating to food and nutrition, drawing on collections, aimed at vulnerable and marginalized groups.</p> <p>Number of research activities drawing on collections that relate to nutrition and addressing malnutrition.</p> <p>Number of partnership programmes that directly support ending of malnutrition through provisioning of food and other dietary needs.</p> |
| <p>SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture 2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment</p> | <p>Collections development that can support programmes related to small-scale food producers, for example by ensuring that traditional knowledge is preserved and maintained.</p> <p>Number of educational, awareness-raising, research and partnership programmes based on collections that support small-scale food producers, both in terms of supporting the producers themselves, and that support others to support them.</p> <p>Policies and plans in place to ensure that tourism activities support (and do not infringe upon) people’s rights of access to land for agricultural purposes.</p> <p>Provide markets for small-scale food producers’ products.</p> |
| <p>SDG 2: End hunger, achieve food security and improved</p> | <p>Collections development related to sustainable food</p> |

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| <p>nutrition and promote sustainable agriculture 2.4 By 2030, ensure sustainable food production systems to implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.</p> | <p>production where appropriate.</p> <p>Number of educational and awareness-raising programmes incorporating sustainable food production perspectives, and that aim to reduce the impact of disasters on communities.</p> <p>Number of targeted programmes that support those most exposed and vulnerable to disasters, whether locally or farther afield.</p> <p>Number of research activities drawing on collections that relate to resilient agricultural practices, helping mitigate and adapt to climate change, flooding and other disasters.</p> <p>Policies and plans in place to eliminate unsustainable food production from supply chains and in any food provision in collections-based institutions.</p> <p>Number of partnership activities drawing on collections that contribute to Disaster Risk Reduction plans, supporting resilient agricultural practices, and helping mitigate and adapt to climate change, flooding and other disasters.</p> |
| <p>SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed</p> | <p>Collections development related to genetic diversity of seeds, cultivated plants, farmed and domesticated animals (notably of local or at-risk varieties) and related wild species, for example in herbaria, museums, seed and gene banks, and seed libraries.</p> <p>Number of educational programmes related to genetic diversity of domesticated plants, animals and wild relatives.</p> <p>Number of educational programmes related to fair and equitable benefits of use of genetic resources and associated traditional knowledge, following international agreements (e.g. Nagoya Protocol).</p> <p>Number of educational and awareness programmes for people to ensure that they are aware of their rights and protections in terms of traditional knowledge, and exploitation of genetic resources.</p> <p>Number of research activities that help understand traditional knowledge, and genetic diversity of crop plants and animals.</p> |

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| | <p>Ensure that producers of crop plants and animals are fairly compensated.</p> <p>Policies and procedures in place to ensure legal compliance with fair and equitable benefits of use of genetic resources and associated traditional knowledge, following international agreements (e.g. Nagoya Protocol).</p> <p>Number of partnerships at national, regional and international levels, as appropriate, to soundly manage seed and plant banks.</p> |
| <p>SDG 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p> <p>9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all</p> | <p>Development of research-useful collections to support reliable, sustainable and resilient use by researchers and others.</p> <p>Number and proportion of collections facilities and stores that support economic development and human well-being.</p> <p>Number and proportion of collections facilities and stores that provide affordable and equitable access for all.</p> <p>Investment in collections facilities.</p> <p>Inclusion of collections information in regional and transborder initiatives, notably via digital access for discoverability.</p> |
| <p>SDG 9. Build resilient infrastructure, promote inclusive and sustainable industrialization</p> <p>9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public</p> | <p>Number and proportion of collections facilities that effectively support research and researchers.</p> <p>Number and proportion of staff who are appropriately skilled to undertake and support collections-based research.</p> <p>Expenditure on initiatives to enhance and upgrade collections facilities.</p> <p>Numbers of staff engaged in to supporting and developing research use based on collections.</p> <p>Number of initiatives to encourage innovation drawing on collections.</p> |

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| <p>and private research and development spending</p> | <p>Increase in number of research and development workers per 1 million people.</p> <p>Increase in public and private research and development spending being used to develop and make use of collections.</p> |
| <p>SDG 11. Make cities and human settlements inclusive, safe, resilient and sustainable 11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage</p> | <p><i>11.4.1 Total expenditure (public and private) per capita spent on the preservation, protection and conservation of all cultural and natural heritage, by type of heritage</i></p> <p>Plans, policies and procedures in place for the safe use of collections for a variety of purposes, protecting and safeguarding both collections and those who use them.</p> <p>Plans, policies and procedures in place for the Identification, safeguarding and protection of cultural and natural heritage at risk</p> <p>Collecting programmes in place to protect and safeguard cultural and natural heritage, addressing the needs of communities and stakeholders.</p> <p>Number and diversity of educational, awareness-raising, research programmes, and partnerships that aim to strengthen protection of cultural and natural heritage.</p> |
| <p>SDG 11. Make cities and human settlements inclusive, safe, resilient and sustainable 11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations</p> | <p>Collections-based research that supports the understanding and management of disasters of all kinds.</p> <p>Plans in place for public education and awareness drawing on collections and collections-based institutions to reduce exposure and vulnerability to disasters of all kinds.</p> <p>Plans in place to ensure collections-based institutions, and people related to them (including workers) are protected from economic losses as a result of disasters.</p> <p>Plans in place to provide special support/protection to poor and vulnerable people and groups in and following disasters.</p> |

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| <p>SDG 13. Take urgent action to combat climate change and its impacts 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries</p> | <p>Plans in place for near and longer term to withstand and actively adapt to climate-related hazards and natural disasters.</p> |
| <p>SDG 13. Take urgent action to combat climate change and its impacts 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning</p> | <p>Plans in place to enhance positive contributions to addressing climate change through use of collections. Plans in place to ensure collections, collections institutions and broader society can adapt effectively to climate change.</p> <p>Plans in place for effective education and awareness raising on climate change mitigation, adaptation, impact reduction and early warning.</p> <p>Plans in place to reduce negative contributions of collections-related functions, e.g. measuring greenhouse emissions with plans and targets in place to reduce them.</p> |
| <p>SDG 13. Take urgent action to combat climate change and its impacts 13.B Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities.</p> | <p>Number of initiatives (educational, awareness-raising, research, and/or partnerships) drawing on collections and collections-based institutions that build capacity for climate change planning and management in least developed countries and small island developing States.</p> <p>Number of targeted initiatives drawing on collections and collections-based institutions aimed at building capacity for women, youth and local and marginalized communities in least developed countries and small island developing States.</p> |
| <p>SDG 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss 15.5 Take urgent and</p> | <p>Number and proportion of habitats, notably endangered habitats, and species with favourable conservation status, with special reference to locally, nationally and globally endangered species.</p> <p>Information on, programmes relating to, collections development, and partnerships relating to habitats and species drawing on collections in place, to support their protection and continued existence.</p> |

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| significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species | | Measures taken to enhance biodiversity value of green space associated with collections institutions. | | | |
| SDG 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss 15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed | | Policies, plans and agreements in place for access and benefit sharing relating to use of collections, in line with the Nagoya Protocol (notably relating to natural history collections, gene banks, tissue banks, seed banks). Effective communication and dissemination methods in place to promote access to resources, and access to relevant policies, plans and agreements, in place. | | | |
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