

FORMAT		
1. Name of resource	Botanic Gardens Conservation International Seed Conservation Hub and Training Resources	
2. Location	https://www.bgci.org/resources/bgci-tools-and-resources/seed-conservation-hub-and-training-resources/	
3. Alternative location		
4. Author[s]	Botanic Gardens Conservation International	
5. Publisher/producer/host	Botanic Gardens Conservation International	
6. Year		
7. Suggested citation	Botanic Gardens Conservation International, Seed Conservation Hub and Training Resources, https://www.bgci.org/resources/bgci-tools-and-resources/seed-conservation-hub-and-training-resources/	
8. Languages in which available	English (online sections translate automatically), some elements in French, Spanish, Chinese	
9. Geographic area resource relates to	Global	
10. Does the resource relate to a specific time frame?		
11. Type	Report	
	Toolkit/Framework/Roadmap	
	Sign-post to other resource (database)	Yes
	Case studies	
	Other	Yes, online course with videos and e-learning modules, quizzes
12. If this is part of an initiative, what is the initiative?	UN Decade on Ecosystem Restoration, see https://www.decadeonrestoration.org/ .	
COLLECTIONS AND COLLECTIONS-BASED INSTITUTIONS		
13. Explicit links to collections	Yes	
14. Explicit links to museums/libraries/archives	Yes	
15. Types of institutions the resource covers	Museums	X
	Archives	X
	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, geography and ethnology, anthropology, archaeology	
	Science, natural history, technology, medicine, engineering, manufacturing	X
17. If no explicit links to collections, justification for inclusion		
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'		
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		X

vi. governance and management	X
vii. security, disaster preparedness and risk reduction	X
Direct external leadership, partnerships and collaborations towards sustainable development more effectively , for example by developing impactful partnerships	X
19. Does the resource relate clearly to any international conventions (mark all that apply)?	
Culture conventions:	
1952, 71 Protection of Copyright and Neighbouring Rights	X
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	X
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?	“The seed collecting ‘hub’ provides a ‘one-stop-shop’ for seed banking information and training resources in order to build capacity to support seed collecting and raise seed banking standards.” (Seed Banking Hub and Training Resources)
21. Intended audience of resource	[those working with seed bank development and use]
22. Process of development	
23. Organisation/structure/contents	Why do we have seed banks? Why store seeds and not whole plants? How are botanic gardens involved? Related news on seed conservation Seed conservation hub and training resources [list of resources, including e-learning modules, videos, quizzes, tools, case studies]
FRAMEWORKS	
24. Framework structure	
25. Relevant policy considerations	Yes
26. Resources for implementation identified	Yes
27. Specific assessment points/indicators/mile	No

stones/action plan for monitoring	
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	X
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	<p>The resource can help inform a range of activities relating to collections-based institutions preserving and/or storing plant material and providing educational programmes related to agriculture. These contribute towards a number of SDG targets including:</p> <p>1.4 (access to property, including crop heritage), 2.5 (ensuring fair sharing of benefits from use of crops and traditional knowledge), 9.1 (inclusive infrastructure that supports economic development, with a focus on equitable access), 9.5 (promoting scientific research), 11.4 (strengthen efforts to protect and safeguard cultural and natural heritage), 16.10 (on ensuring the right to information and protecting other fundamental freedoms), 16.B (upholding laws and adopting policies for sustainable development), 17.16 (international partnerships) and 17.17 (cross-sector partnerships).</p> <p>The resource can also help to understand the context regarding target 15.6 (fair sharing of benefits from use of</p>

	<p>genetic resources). The resource can also help support the development of knowledge and attitudes regarding traditional agriculture and agricultural methods (4.4, 4.7), also contributing to SDGs 12.8 and 13.3.</p> <p>Preservation of crop and plant diversity contributes towards Disaster Risk Reduction and sustainable agriculture, reducing the impact of climate and other disasters on poor people (SDG 1.5), ensuring people have reliable access to food (SDG 2.1), enhancing agricultural productivity (SDG 2.3), sustainable food production and resilient agricultural practices (SDG 2.4), reducing the impact of disasters (11.5), strengthening resilience and adaptive capacity to climate change and natural disasters (13.1).</p> <p>The focus on planning at a national level contributes to SDG 13.2 (climate change planning at national level).</p>
35. SDGs and SDG targets the resource helps advance	
<p>SDG 1: End poverty in all its forms everywhere 1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance</p>	<p>Numbers and proportions of people from particular groups using collections in comparison with demographics in broader society.</p> <p>Numbers of people accessing collections.</p> <p>Number of targeted programmes that aim to enhance access to collections by disadvantaged groups.</p> <p>Sustainable tourism that enhances local communities' access to basic services, ownership and control over land and other forms of property (including cultural and natural heritage), as well as to technology and markets.</p> <p>Involvement of people from disadvantaged groups in decision-making activities and processes relating to collections and collections-based institutions.</p>
<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, nutritious and sufficient food all year round</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 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 2.3 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 nutrition and promote sustainable agriculture</p> <p>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>Collections development related to sustainable food 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</p> <p>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> <p>Ensure that producers of crop plants and animals are fairly compensated.</p> <p>Policies and procedures in place to ensure seed banks are soundly managed, in terms of risk management and emergency planning.</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 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all 4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship</p>	<p>Number of young people and adults in skills-development activities and programmes drawing on collections, for employment, decent jobs and entrepreneurship</p> <p>Increase in number of young people and adults in such programmes</p> <p>Number and proportion of staff who have received training in the last year, to better support their contribution to the SDGs.</p> <p>Programs and processes in place to ensure the availability of a skilled workforce.</p>
<p>SDG 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights,</p>	<p>Numbers of people in each type of programme drawing on collections from different demographic groups.</p> <p>Increases in numbers of people in each type of programme from different demographic groups.</p> <p>Proportion of people involved in such programmes in relation to overall audience size.</p> <p>Evidence that learners have acquired knowledge and skills to promote sustainable development.</p>

<p>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</p>	
<p>SDG 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation 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 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 and private research and development spending</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 supporting and developing research use based on collections.</p> <p>Number of initiatives to encourage innovation drawing on collections.</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, safeguard and make use of cultural and natural heritage, addressing the needs of communities and stakeholders, and ensuring that collections can be an effective resource for sustainable development.</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 steadily work to reduce their contributions to disaster risk, for example by reducing pollution and waste 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>

<p>SDG 12 Ensure sustainable consumption and production patterns 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature</p>	<p><i>12.8.1 Extent to which (i) global citizenship education and (ii) education for sustainable development (including climate change education) are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment</i></p> <p>Extent to which global citizenship education and education for sustainable development (including climate change education) are mainstreamed in formal, informal and non-formal education programmes and activities drawing on and related to collections.</p>
<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 13.2 Integrate climate change measures into national policies, strategies and planning</p>	<p>National organisations, institutions and networks relating to collections and collections-based institutions to have integrated climate change measures into policies, strategies and planning relating to collections and collections-based institutions, including funding and other resourcing considerations.</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 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land</p>	<p>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).</p>

<p>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</p>	<p>Effective communication and dissemination methods in place to promote access to resources, and access to relevant policies, plans and agreements, in place.</p>
<p>SDG 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels. 16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements</p>	<p>Adopt and implement constitutional, statutory and/or policy guarantees for public access to information.</p> <p>Plans in place, and plans implemented to enhance public access to information relating to collections.</p> <p>Plans in place, and plans implemented to support fundamental freedoms, in line with human rights, national and international agreements and legislation.</p> <p>Plans and procedures in place for public access to information relating to the operation and management of collections-based institutions.</p> <p>Complaint mechanism in place for public to use where public access to information and fundamental freedoms not supported or fulfilled.</p>
<p>SDG 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels. 16.B Promote and enforce non-discriminatory laws and policies for sustainable development</p>	<p><i>16.B.1 Proportion of population [audience/users/non-users] reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law</i></p> <p>Number and proportion of policies that incorporate sustainable development considerations, in the full sense of recognizing all three of social, economic and environmental considerations.</p>
<p>SDG 17. Partnerships for the goals 17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder</p>	<p>Number and/or increase in number, and diversity of global and international multi-stakeholder partnerships that share collection-related knowledge, expertise, technology and financial resources to address the SDGs, or that otherwise involve collections-based organisations and institutions.</p>

<p>partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries</p>		<p>Number and/or increase in number, and diversity of global and international multi-stakeholder partnerships involving developing countries that share collection-related knowledge, expertise, technology and financial resources to address the SDGs.</p>			
<p>SDG 17. Partnerships for the goals 17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships</p>		<p>17.17.1 Amount of United States dollars committed to public-private and civil society partnerships</p> <p>Number and/or increase in number, and diversity of local, national and regional multi-stakeholder (public, public-private and civil society) partnerships that address the SDGs drawing on collections, or that otherwise involve collections-based organizations and institutions.</p>			
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13	14	15	16	17	