

FORMAT		
1. Name of resource	Interactive Toolkit for Crop Wild Relative Conservation Planning 1.0	
2. Location	http://www.cropwildrelatives.org/	
3. Alternative location		
4. Author[s]	Biodiversity International	
5. Publisher/producer/host	Biodiversity International	
6. Year	2017	
7. Suggested citation	Magos Brehm J. and others (2017). Interactive Toolkit for Crop Wild Relative Conservation Planning version 1.0. University of Birmingham and Biodiversity International, available at http://www.cropwildrelatives.org/conservation-toolkit/introduction/	
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	
	Toolkit/Framework/Roadmap	Yes
	Sign-post to other resource (database)	Yes
	Case studies	
	Other	
12. Part of an initiative?	“The Interactive Toolkit for Crop Wild Relative Conservation Planning was developed within the framework of the SADC CWR project www.cropwildrelatives.org/sadc-cwr-project (2014-2016), which was co-funded by the European Union and implemented through ACP-EU Co-operation Programme in Science and Technology (S&T II) by the African, Caribbean and Pacific (ACP) Group of States. Grant agreement no FED/2013/330-210.”	
COLLECTIONS AND COLLECTIONS-BASED INSTITUTIONS		
13. Explicit links to collections	Yes	
14. Explicit links to museums/libraries/archives	Yes	
15. Types of institutions relevant to	Museums	X
	Archives	X
	Libraries	X

	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	X
	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		X
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	
vi.	governance and management	
vii.	security, disaster preparedness and risk reduction	
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		
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?	<p>“The Interactive Toolkit for Crop Wild Relative Conservation Planning is designed to provide guidance to plan and implement active in situ and ex situ conservation of CWR at national level. The conservation recommendations that result from this national CWR conservation planning process are used to develop National Strategic Action Plans (NSAP) (or National Strategies) for the conservation and sustainable use of CWR (to know more about NSAP development, click here).</p> <p>There is no single method for planning CWR conservation or for developing an NSAP for the conservation of CWR. This is mainly due to factors concerning financial resources, availability of baseline biodiversity data, the country where the NSAP is to be implemented, as well as the focal area and remit of the agencies that are responsible for formulating and implementing the NSAP. Nevertheless, CWR conservation planning can be viewed as a series of steps and decisions that follow the same basic pattern in all countries. This Toolkit and its protocols, examples and resources should thus be viewed</p>	

	<p>as a framework and an aid for planning CWR conservation, not a prescription. It is important to note that the Toolkit can be used for the entire conservation planning process or for individual steps, and that the steps do not necessarily have to be followed in the same order.”</p>
21. Intended audience of resource	<p>“Three different groups of users may access and use this Toolkit:</p> <ul style="list-style-type: none"> • FAO national focal points. • Agencies responsible for planning and implementing national strategies, such as national agricultural or environmental agencies. • NGOs (e.g. farmers’ organizations), local institutions (e.g. genebanks, universities, research institutes), and individual scientists.”
22. Process of development	<p>“The Interactive Toolkit for Crop Wild Relative Conservation Planning was based on Maxted N, Magos Brehm J and Kell S (2013) Resource Book for the Preparation of National Plans of Crop Wild Relatives and Landraces. Food and Agriculture Organization of the UN, Rome, Italy.”</p>
23. Organisation/structure/contents	<p>[Webpage] Introduction Who the toolkit is for How to use the toolkit Download PDF version</p> <p>[PDF version] 1 HOME PAGE 15 2 CROP WILD RELATIVES 17 3 NATIONAL STRATEGIC ACTION PLANS 39 4 TOOLKIT – THE MODULES 46 4.1 NATIONAL CWR CONSERVATION PLANNING 48 4.2 GENERATION OF A CWR CHECKLIST 64 4.3 PRIORITIZING THE CWR CHECKLIST 79 4.4 COMPILATION OF THE CWR INVENTORY 97 4.5 DIVERSITY ANALYSES: DISTRIBUTION AND ECOGEOGRAPHIC DIVERSITY OF PRIORITY CWR 100 4.6 DIVERSITY ANALYSES: GENETIC DATA ANALYSIS OF PRIORITY CWR 119 4.7 PRIORITY CWR: NOVEL THREAT ASSESSMENT 138 4.8 GAP ANALYSIS OF PRIORITY CWR 150 4.9 CLIMATE CHANGE ANALYSIS OF PRIORITY CWR 166 4.10 ESTABLISHMENT AND IMPLEMENTATION OF IN SITU CONSERVATION PRIORITIES 167 4.11 ESTABLISHMENT AND IMPLEMENTATION OF EX SITU CONSERVATION PRIORITIES 180</p>

	4.12 MONITORING CWR DIVERSITY 188 4.13 PROMOTING THE USE OF CONSERVED CWR DIVERSITY 203 4.14 A NOTE ON CWR DATA MANAGEMENT IN CONSERVATION PLANNING 211
FRAMEWORKS	
24. Framework structure	The resource can be considered as a framework.
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	
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	The resource can help support action for SDG targets relating to agricultural heritage and Access and Benefit-sharing of use of genetic resources, scientific research, and education on related topics. These include SDGs 2.3

	<p>(agricultural productivity), 2.5 and 15.6 (Access and Benefit-sharing of use of genetic material), 4.7 (Education for Sustainable Development), 9.1 (infrastructure for human wellbeing and sustainable development), 9.5 (support research), 11.4 (strengthen efforts to protect and safeguard cultural and natural heritage), 12.8 (information for sustainable development and lifestyles in harmony with nature) and 15.5 (prevent habitat destruction and extinctions).</p> <p>The focus on climate adaptation can support SDGs 2.4 (food security, in face of climate and other impacts), 13.1 (climate adaptation and ability to deal with natural hazards) and 13.3 (education and information for climate action).</p> <p>The focus on international capacity building supports SDGs 17.6 (sharing science, technology and knowledge) and 17.16 (international partnerships).</p>
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35. SDGs and SDG targets the resource helps advance

<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 2.4 By 2030, ensure sustainable food production systems to implement resilient agricultural</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>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>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> <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 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, 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>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>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</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 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</p> <p>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 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 13.3 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 degradation and halt biodiversity loss 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the</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> <p>Measures taken to enhance biodiversity value of green space associated with collections institutions.</p>

<p>extinction of threatened species</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 15.6 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>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>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 17. Partnerships for the goals 17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism</p>	<p>Number and diversity of North-South, South-South and triangular co-operations and projects to support access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms.</p>
<p>SDG 17. Partnerships for the goals 17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the</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>Number and/or increase in number, and diversity of global and international multi-stakeholder partnerships involving developing countries that share collection-related</p>

achievement of the sustainable development goals in all countries, in particular developing countries		knowledge, expertise, technology and financial resources to address the SDGs.			
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