

IUCN SSC Conservation Genetics Specialist Group



2020 Report



Mike Bruford



Gernot Segelbacher

Co-Chairs

Mike Bruford (1)
Gernot Segelbacher (2)

Location/Affiliation

(1) School of Biosciences, Cardiff University,
Wales
(2) University of Freiburg, Germany

Number of members

108

Social networks

Twitter: @congenetics
Website: www.cgsg.uni-freiburg.de



CONSERVATION GENETICS
SPECIALIST GROUP

Mission statement

The Conservation Genetics Specialist Group (CGSG) will establish guidance for pressing genetic policy and management issues. CGSG also provides genetic advice on policy and management within IUCN's Species Survival Commission (SSC) and expert knowledge and assistance to SSC Specialist Groups. CGSG will facilitate a fuller appreciation, evaluation and conservation of genetic diversity and resources at all levels, providing a forum for all stakeholders to value and conserve this crucial element of Planet Earth's life systems.

Projected impact for the 2017-2020 quadrennium

Genetic diversity is one of the three major components of biodiversity, but still overlooked in most plans for conserving biodiversity. We foresee that raising the awareness of genetic diversity as one of the key requisites for species to adapt and survive will directly benefit species action plans. In addition, the implementation of genetic criteria into the Red List assessment process will help us to define the conservation status more precisely.

Targets for the 2017-2020 quadrennium

Plan

Policy: (1) engage with the Convention on Biological Diversity (CBD) 2020 process; (2) propose an IUCN resolution on genetics in CBD targets; (3) develop IUCN guidance for monitoring changes in genetic diversity; (4) develop a guidance document on biobanks and planning for conservation of intra-specific genetic diversity.

Network

Capacity building: (1) develop Guidelines on Distinct Genetic Diversity during the development of *A Global Standard for the Identification of Key Biodiversity Areas*; (2) for all regions, regional self-supporting groups have been established for conservation genetics advice..

Synergy: ensure every Specialist Group Chair has a direct contact point(s) in CGSG, who is responsible for rapid response to genetic questions, advice, support and escalation of major issues to the wider IUCN CGSG.

Communicate

Communication: (1) publish position statement for the use of genetics in defining conservation units; (2) provide online resources for definitions of genetic terminology, guidelines on sampling and study design, and distinguish among technical approaches; (3) be proactive in communicating the activities of the CGSG; (4) raise awareness of conservation genetics within the broader community.

Technical advice: produce a guidance document for the use of genetics in Red Listing.

Activities and results 2020

Plan

Policy

i. CGSG provided input to the SSC Post-2020 Biodiversity Targets Task Force, held several meetings with the CBD Secretariat, and gave webinars across the world for CBD focal points. Several papers have been published by key members: e.g. (1) Laikre, L., et al. (2020). 'Post-2020 goals overlook genetic diversity'. *Science* 367:1083–1085. <https://doi.org/10.1126/science.abb2748>; (2) Hoban, S., et al. (2020). 'Genetic diversity targets and indicators in the CBD post-2020 Global Biodiversity Framework must be



CGSG members joint workshop with G-BIKE
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improved'. *Biological Conservation* 248:108654. <https://doi.org/10.1016/j.biocon.2020.108654>; (3) Díaz, S., et al. (2020). 'Set ambitious goals for biodiversity and sustainability'. *Science* 370:411–413. <https://doi.org/10.1126/science.abe1530>. (KSR #26)

ii. A resolution on genetics in CBD targets was submitted and has now been approved as Motion 109 – A call for increased consideration of genetic diversity in IUCN planning and actions. (KSR #26)

iii. A draft version of IUCN guidance for monitoring changes in genetic diversity has been written. (KSR #26)

Network

Capacity building

i. Mike Bruford contributed to the current set of guidelines on Distinct Genetic Diversity during the development of *Guidelines for using A Global Standard for the Identification of Key Biodiversity Areas v1.1*, published in November 2020 (he is a member of the KBA Standards Group). (KSR #18)

ii. Regional capacity for conservation genetics advice built with an aim of having self-supporting regional groups in five years. Starting groups will contain domiciled individual and non-domicile advisors active in regional research and capacity building, under the understanding that non-domicile individuals will step back from group after 5 years. (KSR #18)

Communicate

Communication

i. A number of different conferences or sessions have been organised by members: (1) G-BIKE workshop in Malta, (2) G-BIKE conference in Slovenia on biotechnological advances, (3) workshop on temporal genetic diversity analysis. Regular updates are provided on Facebook and Twitter. (KSR #28)

ii. An EU Cost Action Programme (G-BIKE) has been running by several members to raise awareness of genetic tools in a conservation background. Several policy briefs have been issued. For more information see: <https://g-bikegenetics.eu/en> (KSR #28)

Acknowledgements

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Summary of activities 2020

Components of Species Conservation Cycle: 3/5

Plan	3	
Network	2	
Communicate	2	

Main KSRs addressed: 18, 26, 28

KSR: Key Species Result