

IUCN SSC Conservation Genetics Specialist Group



2019 Report



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Co-Chairs

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Location/Affiliation

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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) build regional capacity for conservation genetics advice 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 the group after five years.

Synergy: 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 pro-active 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 2019

Plan

Policy

- i. CBD 2020 process: We provided input to the SSC Post-2020 Biodiversity Targets Task Force. (KSR #26)
- ii. A resolution on genetics in CBD targets was submitted and is now being discussed as Motion 109. (KSR #26)



G-BIKE kick off meeting including many members of CGSG
Photo: Nevena Velickovic

iii. IUCN guidance for monitoring changes in genetic diversity: A working group has been established and continued developing a protocol for meta-analysis. A complete step by step protocol has been established and 34,000 papers identified to be screened. (KSR #26)

iv. A group has been established under the leadership of Mike Bruford, Christina Hvilsom and Ania Brown to work on a guidance document on biobanks and planning for conservation of intra-specific genetic diversity. (KSR #26)

Network

Capacity building

i. Mike Bruford contributed to the current set of guidelines on Distinct Genetic Diversity during the development of *A Global Standard for the Identification of Key Biodiversity Areas* (he is a member of the KBA Standards Group). However, more work needs to be done for the next version to adequately include genetic diversity. (KSR #18)

ii. For all regions, regional self-supporting groups have been established for conservation genetics advice. (KSR #18)

Synergy

i. With the availability of a specific person (Silvia Pérez-Espona) as a part-time secretary based at University Edinburgh, we have established a central focal person for contact to provide rapid response to genetic questions, advice, support and escalation of major issues to the wider

IUCN CGSG. Contacts with the Connectivity Conservation Specialist Group (CCSG) and the Cat Specialist Group have been established for establishing a connectivity plan for large carnivores in Europe. Gernot Segelbacher is member of the Technical Group of the Task Force on Synthetic Biology. (KSR #29)

Communicate

Communication

i. A working group has been established under the leadership of Dr Helen Senn to prepare a position statement on the use of genetics in defining conservation units. An article was recently published by members on species delimitation using genomics (Stanton, D.W.G., et al. (2019). More grist for the mill? Species delimitation in the genomic era and its implications for conservation. *Conservation Genetics* 20:101–113. [DOI: 10.1007/s10592-019-01149-5]; three CGSG members as co-authors), but a position statement remains pending. (KSR #28)

ii. G-BIKE COST Action, involving CGSG members, was funded and kicked off March 2019 (<https://www.cost.eu/actions/CA18134/>), and is upgrading the existing ConGRESS website to include genomic indicators (<http://www.congressgenetics.eu/Default.aspx>). (KSR #28)

iii. A number of different conferences or sessions have been organised by members: (1) G-BIKE kick off meeting, Brussels; (2) G-BIKE conference, Sarajevo; (3) G-BIKE working group 2 meeting, Novi Sad; (4) GenRes Bridge workshop, Finland; (5) African Lion Working Group;

(6) workshop on Conservation Genetics of Southeast Asian Wildlife; (7) conference regular updates on Facebook and Twitter. (KSR #28)

iv. An EU COST Action Programme (G-BIKE) has been kicked off by several members to raise awareness of genetic tools in a conservation background. For this, a first policy brief has already been issued (sites.google.com/fmach.it/g-bike-genetics-eu/home). (KSR #28)

Technical advice

i. A working group under the lead of Prof. Cock van Oosterhout has been established to prepare a guidance document for the use of genetics in Red Listing. (KSR #4)

Acknowledgements

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Summary of activities 2019

Components of Species Conservation Cycle: 3/5

Plan	4	
Network	3	
Communicate	5	

Main KSRs addressed: 4, 18, 26, 28, 29

KSR: Key Species Result