Assuming that providing research results in open access is beneficial to many stakeholders and will lead to better research, this document suggests a number of activities by which participants in the Global Research Council (GRC) can foster the open exchange of research results. After briefly introducing the concept and the benefits of open access, some common principles for transitioning to open access are suggested as a basis for the action plan. The proposed activities aim at raising awareness for open access, at promoting and supporting open access, and at assessing the implementation of the actions suggested. The action plan is designed to take into account that participants in the GRC come from various backgrounds, have various degrees of expertise in dealing with open access, and have different remits. Thus, funding agencies need to consider which of the proposed activities are appropriate to be taken up by (possibly consortia of) participants in the GRC.
Preamble

Open access can be instrumental for improving the quality and impact of research. To stimulate the development of, and potential for, new and better opportunities for the scholarly and scientific endeavour, the Global Research Council (GRC) endorses this Action Plan towards Open Access to Publications as a living document. The GRC will monitor progress in implementing the Action Plan which is expected to evolve accordingly.

I. Mission

The advent of the internet led to fundamental changes both in the way research is carried out and how publishing is done. In order to maximise the scientific, scholarly and social benefits which arise from the possibility and even the necessity to share and discuss research results of any kind over the web, open access to these results is a prerequisite. By open access we mean that research information can be accessed online without legal, technical or financial barriers. In addition, provided that authors and right-holders gave explicit permission, such information may be re-used in manifold ways, especially for computer-assisted analyses, as long as the original authors’ or creators’ intellectual property rights are respected. Open access may relate to all types of publicly funded research outputs wherever these outputs are meant to foster exchange and collaboration; open access does not relate to research which needs to be kept confidential due to privacy issues, business secrets or commercial interests.

Open access is beneficial to a broad range of stakeholders. It leads to better science e.g. by increasing access to knowledge, by improving the pace and efficiency of research, by enabling computation on research information, and by offering opportunities to foster collaboration and exchange globally. In addition, by increasing authors’ visibility, open access is also beneficial to the individual researcher. Furthermore, increased access to knowledge provides societal benefits to many who rely on research results, be it in patient care, be it in politics and decision making, be it in entrepreneurship or industry, be it in journalism or society at large: there is an enormous need for research information outside universities and research institutes which can be served best by openly accessible research information.

Considering the fundamental changes in scholarly communication and the above mentioned benefits and taking into account that the Global Research Council (GRC) aims at fostering even better international cooperation, the GRC suggests the following Action Plan to stimulate and support open access. Bearing in mind that research outputs take many different forms (e.g. journal articles, books, research data, animation, software or tools) and that new forms of research outputs are likely to emerge, the Global Research Council’s first Action Plan concentrates on open access to research articles from scholarly journals.

II. Principles for transitioning towards open access

The organisations that participate in the Global Research Council lay the foundation for their Action Plan towards open access by agreeing on the following principles.

1. In order to increase their return on investments, research councils encourage open access to all results from publicly funded research which originated from their funding. This relates specifically to journal articles.

2. The research councils see it as their responsibility to raise their grantees’ awareness and to educate (especially young) researchers regarding the importance, the benefits, and the various approaches towards open access.
3. Research funders will provide support for their grantees to encourage and enable them in making their works openly accessible with suitable means, e.g. through open access policies, through addressing copyright, or through dedicated open access funding.

Individual policies that are based upon these principles will need to be re-evaluated on a regular basis to possibly modify and further improve them. Such re-evaluation is likely to involve a number of stakeholders, just as the development of this Action Plan has involved many stakeholders.

III. Regarding regional and individual differences

A global Action Plan needs to suggest mechanisms for a proper and successful implementation of open access. However, in developing an Action Plan the obvious differences in each world region have to be taken into account, especially with regard to (information) infrastructure, access to and provision of research information, and further enabling conditions. This means that:

- Open access relates to the ICT infrastructure which might need further deployment in some regions of the world. Yet in improving connectivity by putting adequate resources into ICT, it is important that access to infrastructure and access to digital content is regarded in parallel and not decoupled.
- In countries where accessing the research carried out elsewhere can be even more problematic than looking for ways to disseminate its own research, researchers will truly benefit from openly accessible information. Considering that the transition to open access may take some time, increasing access through subscription licenses may be an option to be explored in such countries, especially if large consortia could bundle marketing powers and explore solutions to capitalise on economies of scale.
- For many authors, funds to cover expenses for open access publications might not be readily available. However, in transitioning to open access undue publication barriers must be avoided. It will be necessary to look for solutions that assist those authors in openly sharing their research results and thus making impact.
- The structure of academia and the research communities, the landscape of publishers, and the funding of research and publications vary from country to country just as the interaction between the stakeholder groups also varies. Taking into account these differences, specific approaches towards implementing open access that are well suited for country A might not be feasible in country B.
- Finally, in implementing open access, issues of language and standardisation need to be taken into account as well as differences which might arise from differences between scientific disciplines.

The following Action Plan responds to the above mentioned differences and specific backgrounds by proposing diverse action items. Each world region, country or funding agency is invited to consider and act upon those suggestions that seem most appropriate to carry the implementation of open access forward in an efficient, coordinated and purposeful manner.

IV. Proposed activities

In developing an Action Plan for open access, actions will not only be required from the research funders, but also from many other stakeholders (e.g. researchers, universities and research institutions, libraries, journal publishers), making communication between all stakeholders essential. The main reason for such communication is to identify win-win-situations and mutual benefits in promoting and implementing open access.
Action Plan towards Open Access to Publications

Furthermore, a considerable amount of public money is already spent on acquiring and providing scientific information, not only where dedicated funding schemes have been developed in order to provide national access to institutions' research results, but also via expenses for consortial or local licensing. In transitioning to open access, efficient mechanisms to shift money from subscription budgets into open access publication funds need to be developed. Such mechanisms require clear cost structures, precisely defined publication services, and transparent pricing models.

The major principles and aims of the Action Plan are simple: they are (a) encouragement and support for publishing in open access journals, (b) encouragement and support for author self-deposit into open access repositories, and (c) the creation and inter-connection of repositories. In order to achieve these aims, diverse strategies are required to ensure widening access and re-use, as only a very broad approach will help all countries. Reflecting on the main topics meriting focused attention – quality, costs, and procedures (including IPR) –, the following section suggests high level opportunities to foster open access. The Global Research Council itself will not go into fine tuning these opportunities, but rather invite either individual or consortia of organisations to work out the implementation details. One also needs to bear in mind that future changes in the research environment, e.g. through social media, will eventually lead to other and additional approaches towards encouraging and implementing open access.

1. Raising awareness in the research community

Action 1: Tackle the perception of open access by publicizing success stories
While many researchers welcome the opportunity to provide their results in open access, other authors are still reluctant because they fear infringement of their intellectual property, are afraid of plagiarism, are not familiar with their own institutional or subject-based repository and the deposit process, or simply do not know how to cover related expenses. Many such hurdles and anxieties will be overcome if stories by fellow researchers provide clear evidence of the benefits of open access (e.g. researchers became more visible only by sharing information openly). Such stories could be collected and disseminated broadly, e.g. via newsletters, funding agencies' appropriate dissemination channels, and the GRC website and also be used in awareness raising campaigns.

Action 2: Collect and document best practices for rewarding the provision of open access
A researcher's career is mainly built upon his or her publications, and various ways to acknowledge and remunerate authors for providing open access to their research results already exist (e.g. asking to explicitly list openly accessible information in final grant reports so that they can be acknowledged, taking open access into account in research evaluation processes, or even – as some agencies do – financial remuneration).

To inspire funding agencies to re-use and build on existing remuneration schemes or even develop new ones, existing practices should be collected and documented. Remunerating researchers for open access is likely to take various forms, depending on individual funding agencies' procedures. It will be a strong incentive to provide results through open access if such provision counts in assessment procedures. Again, such best practices can be collected and shared through appropriate outlets such as the GRC website.

Action 3: Organise awareness-raising workshops on open access publishing, especially in developing countries
In many developing countries, researchers and librarians are often unaware of the number of publications available via open access, how to access them, how to publish in these journals, and how to work with and/or establish repositories, etc. Organisations participating in the GRC will consider organising workshops in such countries/regions (perhaps in partnership with other relevant organisations) to raise awareness of these and related issues.
2. Promoting and supporting open access

**Action 4: Encourage publishers to further develop open access models**

Although various approaches to publish open access already exist and could be seen as standard models, there is likely room for further development and experimentation with business models. Funding agencies will invite publishers to discuss new open access models and possibly provide funding to have these models tested, provided that clear cost structures and transparent information on benefits and losses are the basis for such models.

**Action 5: Develop an integrated funding stream for hybrid open access**

The transition to open access cannot be financed by the funding agencies alone. It is also necessary to use funds that are currently tied into the libraries’ acquisitions budgets. The hybrid model of open access could be a starting point to explore best ways to redirect such funding, especially if costs for subscription licenses are adjusted to reflect the growth in open access content. Thus, funding agencies need to work with university libraries, library consortia and publishers to develop models for comprehensible cost correlations and budget shifts.

**Action 6: Monitor and assess the affordability of open access**

Funding agencies should work together to ensure the transparency, justifiability, and affordability of open access publication costs, and to avoid creating unreasonable obstacles for developing countries and fields or scientists which do not have access to sufficient funds.

**Action 7: Work with scholarly societies to transition society journals into open access**

Scientific societies often run prestigious journals which attract many leading authors. In many cases, such high quality journals are produced at relatively modest costs because they involve a good amount of volunteer labour from university or research institute staff. Funding agencies are encouraged to work together with societies to explore opportunities to transition society-owned journals into open access journals. It is recommended to start with journals that meet agencies’ top research priorities.

**Action 8: Supporting self-archiving through funding guidelines and copyright regulations**

The deposit of publications in open access repositories is often hampered not only by legal uncertainties, but also by the authors’ reluctance to take on such additional tasks. Funding agencies will address this issue by exploring whether and how authors can be encouraged and supported in retaining simple copyrights as a precondition to self-archiving. In doing so, funders will also address authors’ need to protect the integrity of their publications by providing guidance on suitable licenses for such purpose.

**Action 9: Negotiate publisher services to facilitate deposit in open access repositories**

Funding agencies are encouraged to discuss with publishers whether and under which conditions they are willing to automatically transfer publications into designated open access repositories. Such negotiations need to be coordinated between the funding agencies and publishers in order to ensure that the conditions granted are essentially the same for all agencies and publishers.

**Action 10: Work with publishers to find intelligent billing solutions for the increasing amount of open access articles**

Funding agencies have already implemented a variety of mechanisms to cover open access charges for their grantees (e.g. providing dedicated funds, reimbursement of costs, block grants to institutions, use of indirect costs in a full cost model), and agencies that do not yet have such mechanisms in place are encouraged to install appropriate ones. Yet the more open access articles (often by research
teams whose members are from different countries and funded by various agencies) need to be financed,1 the more complex are the practicalities of billing and possibly splitting costs. Research funders should work together with publishers (and possibly with libraries from universities and research institutions) to identify and adopt mechanisms that facilitate a sound cost administration and possibly support cost sharing efficiently. Within such an activity, the research and publishing communities are also asked to develop and/or identify creative solutions that enable researchers with limited or no access to funds to publish via open access.

**Action 11: Work with repository organisations to develop efficient mechanisms for harvesting and accessing information**

Open access repositories are valuable assets for their hosting institutions, and funding for the repository infrastructure needs to be regarded as essential capacity building. From the perspective of a researcher, however, there is a need to access — in principle — the content across all repositories around the world. Thus, it is of utmost importance to develop efficient mechanisms for harvesting and accessing information from all publication repositories. Funding agencies will work together with repository organisations to further develop and implement standards that ensure interoperability. In doing so, it is important to not only address technical interoperability, but also semantic interoperability which ensures that information is described and indexed in the same ways.

**Action 12: Explore new ways to assess quality and impact of research articles**

When documenting research results in an article, quality needs to be safeguarded and maintained regardless of the fact whether an article is published in a subscription or in an open access journal. However, articles that are openly available enable developing and deploying new approaches towards assessing quality and impact of research, including methods and technologies that are based on communication tools like social networks or other emerging trends. In close collaboration with scholarly societies and the research community, funding agencies will explore the opportunities arising here. This will eventually lead to developing new metrics and indicators that may be instrumental in remunerating researchers for providing open access to their results (see “Action 2”), while maintaining or enhancing the quality of the research and publications.

3. Assess the implementation of open access

**Action 13: Develop and explore mechanisms to assess the impact of the GRC’s support for open access**

To establish whether the Global Research Council is being successful in implementing this Action Plan, indicators to measure not only the growth of openly accessible research information, but also its impact and how it enhances research, collaboration and the involvement of the public need to be developed, perhaps even on a national and/or regional basis:

- Funding agencies will work together with publishers and the repository community to explore ways to not only count the actual number of open access research articles (be it on publishers’ web sites, be it on open access repositories), but to also give an accurate estimate on the proportion of an agencies’ portfolio that is available in open access.
- The impact of open access on enhancing research should be examined in close collaboration with selected research communities.
- Taking into account the characteristics of research in developing countries, funding agencies are encouraged to establish how open access affects research productivity and international cooperation in these countries especially.

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1 The numbers will increase because of the growing trend to publish in open access. “Slicing” of research results, whereby a comprehensive set of data is split and reported in several shorter papers, however, which could also lead to an increase of articles is not regarded as good scientific conduct and is thus strongly discouraged.
Funding agencies should develop a platform where indicators for assessing the impact of open access and the practice of using such indicators can be demonstrated and shared, e.g. through the GRC website.

**Action 14: Periodically review how the implementation of the Action Plan is evolving**

In order to stimulate and encourage each organisation to actively promote open access by taking up appropriate suggestions outlined above, an evaluation and monitoring mechanism is needed. Therefore information on actions taken and on respective successes and failures will be fed back to the GRC’s International Steering Committee (ISC) via future regional conferences so that the ISC is able to identify issues that need focused attention.

**V. Outlook**

The Global Research Council regards it as important to implement open access steadily and as swiftly as possible. Taking into account that individual regions, countries, and funding agencies work from different backgrounds, they are likely to move at different speeds, yet it is expected that they will all move in the same direction towards fostering open access.

By agreeing on this Action Plan for open access, the Global Research Council has initiated a process. If all regions consequently develop their own activities regarding open access, a primary purpose of this endeavour has been met and the global vision of the open availability of research information can eventually be realised.