

Building synergies in Capacity Development - Recommendations

Capacity development is important to foster the adaptation of new findings in the RDA working groups. However the implementation of capacity development requires human resources, materials and elaborated curricula. The effort of setting up capacity development activities can significantly be reduced by reemploying existing training materials and by creating synergies with training partners. The capacity development working group has gathered free capacity development opportunities and looked at factors that favour the success of capacity development measures and that are listed here as recommendations.

These recommendations build on experiences from performed capacity development activities (especially the GODAN Action online course and the Farm Data Management course), the working group survey and several group meetings along the RDA plenaries. Together with the recommendations, the portrayed success stories provide an idea of how synergies can be used to create new training curricula that can reach a high number of people in the field.

Portrayed success stories

The following success stories portray two Massive Open Online Courses (MOOCs) that are linked to participants of the Capacity Development Working Group and were measured objectively. In addition, MOOCs have the advantage of the potential to reach thousands of stakeholders in a predefined time that can be intensively supported during the learning process. However, these recommendations are not limited to groups that wish to create and implement MOOCs. The Capacity Development Resource Kit (<https://doi.org/10.15497/RDA00054>) provides an overview about further types of capacity development formats that might take less resources to be created, such as webinars, guide books, presentations etc.

GODAN Action online course on Open Data Management in Agriculture and Nutrition

GODAN Action project developed a free MOOC on Open Data Management in Agriculture and Nutrition. This course was delivered 5 times between November 2017 and November 2018, reaching over 5000 people globally, before being made available for unrestricted use on GODAN's website. The course materials are now available in French.

Besides being freely accessible, the MOOC curriculum has a modular design that allows interested parties to reuse exactly what is needed for a future training course.

The contents of the GODAN Action online course can be found here: <https://www.godan.info/open-data-management-agriculture-and-nutrition-course-english>

The course is also DOI registered through Zenodo in Gitbook format:

<https://doi.org/10.5281/zenodo.3588148>

Farm Data Management course

The Technical Centre for Agricultural and Rural Cooperation (CTA) and the Food and Agricultural Organization of the United Nations together with the Pan African Farmers' Organisation (PAFO) built on the content of the GODAN Action online course on Open Data Management in Agriculture and Nutrition and adapted the curriculum to the specific area of farm data management. It supported the work of 5,125 participants from 153 countries. professionals involved in data management in the context of farms and farmer organizations. The farm data management course is a good example of how synergies between different organizations can be used to create capacity development resources that build on the experiences of past initiatives. The GODAN Action provided training materials about data management aspects that are relevant for many working groups in RDA and that can be easily taken over and adapted to other facets of effectively handling research data.

The Farm Data Management course aimed to strengthen the skills of professionals who use, manage data for the benefit of farmers and farmers organisations by exposing them to topics on importance of data in the agriculture value chain and how new and existing technologies, products and services can leverage farm level and/or global data to improve yield, reduce loss, add value and increase profitability and resilience. The objective was to create awareness of data on and for farmers as well as the products and services driving expectations and investments in ICT4Ag including e-extension, precision agriculture and digital financial services, while highlighting shared data principles, including FAIR and other open data conceptual frameworks and also emphasizing the legal and ethical considerations for data rights, privacy and protections.

The course is also DOI registered through Zenodo in Gitbook format:

<https://doi.org/10.5281/zenodo.3663553>

Recommendations

- Capacity development should be integrated in the project work plan with the involvement of experts of the fields from the beginning to ensure that the community benefits from your course and training materials. This will also increase capacity development programs as an integral activity aligned with the actual technical work.
- Explore and find existing materials that can be reused. The working group worked on a Capacity Development Resource Kit that lists available and free training resources in the area of Open Data Management. Many of the listed resources have a relation to the areas of agriculture and nutrition but they can be adapted as well to other topics of interest <https://doi.org/10.15497/RDA00054>
- Once capacity development materials were developed, share them online with an Open Access license, so that as many interested people and initiatives as possible can benefit. One of the most common licenses is provided by the non-profit organisation Creative Commons (CC) which offers six main combinations of licenses depending on the need of the authors: <https://creativecommons.org/> .

- There is a need not only for making the course materials available freely but also looking into ways to increase the discoverability, accessibility and reusability of knowledge. For example, Agriculture Knowledge Hubs need to be developed with access to educational resources, research papers, software algorithms, data, methods and results for verification. This is especially important for lowering the barriers for agriculture research in developing countries. Of course, the building of knowledge hubs would also be beneficial in other areas.
- Appropriate funding needs to be made for translation of already developed course materials into different languages to promote capacity development and diversity of users for a more effective accessibility, use, engagement and understanding of research data.