



**Food and Agriculture Organization
of the United Nations**

Technical summary report

**Training workshop on Bhutan Biosafety Clearing House and
other biosafety repository tools including FAO GM Foods Platform
3-5 March 2020
Tashi Namgay Resort, Paro, Bhutan**



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Food and Agriculture Organization of the United Nations
Bangkok, 2020

Required citation:

FAO. 2020. *Training workshop on Bhutan Biosafety Clearing House and other biosafety repository tools including FAO GM Foods Platform - Technical summary report*. Bangkok

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Abstract

In order to have information on biosafety and Bhutan's obligation as a signatory to the Cartagena Protocol for Biosafety available to users and traders, the Bhutan biosafety clearing house (BBCH) was instituted with the National Environment Commission (NEC). BBCH was transferred to the Bhutan Agriculture and Food Regulatory Authority (BAFRA) under the Ministry of Agriculture and Forests mandated to implement sanitary, phytosanitary and biosecurity measures in early 2019. The BBCH tool was inactive and needed revamping to ensure functionality and with technical and financial support of Food and Agriculture Organization of the United Nations (FAO), the tool was developed aligning to various global tools including FAO GM Foods Platform.

After the development of the national tool, a training workshop entitled "Bhutan Biosafety Clearing House and other biosafety repository tools including FAO GM Foods Platform" was organized by FAO and BAFRA in Paro from 3-5 March 2020. The training was attended by forty-five (45) officials from BAFRA head office and field offices, Biosafety Technical Working Group members and participants from relevant stakeholders like Ministry of Health (MoH), Department of Forests and Park Services (DoFPS), National Environment Commission (NEC), Food Corporation of Bhutan (FCB), Karma Feed and National Seed Centre (NSC). The training focused on familiarizing the participants with the revamped BBCH and other biosafety information repositories. Both face-to-face and interactive online modules were used for the training and after group exercises and facilitated discussions, feedback from the workshop participants on improvement of the utility and feel of the revamped tool was provided to the training organizers.

Key words: Bhutan Biosafety Clearing House (BBCH), Bhutan, biosafety, biotechnology, Food and Agriculture Organization of the United Nations (FAO), FAO GM Foods Platform, information repository, Cartagena Protocol, Convention on Biological Diversity (CBD)

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Acknowledgements

The Food and Agriculture Organization of the United Nations (FAO) would like to express its appreciation to many people who contributed to the report. This report was prepared for FAO, and the development process was coordinated by Masami Takeuchi, Food Safety officer (FAO). The first draft was prepared by Tashi Yangzom and Jambay Dorji, Bhutan Agriculture and Food Regulatory Authority, Ministry of Agriculture and Forests of Bhutan and finalized with reviews, comments and feedback received from the participants. Overall guidance from Somsak Pipoppinyo (FAO Representative to Bhutan) and contributions from several FAO Bhutan colleagues as well as colleagues from FAO Regional Office for Asia and the Pacific are also herewith acknowledged.

Abbreviations and acronyms

| | |
|----------|---|
| BCH | Biosafety clearing house |
| BCH-CP | BCH central portal |
| BBCH | Bhutan biosafety clearing house |
| BAFRA | Bhutan Agriculture and Food Regulatory Authority |
| B-TWG | Bhutan biosafety technical working group |
| CPB | Cartagena Protocol on Biosafety |
| FAO | Food and Agriculture Organization of the United Nations |
| GMO | Genetically modified organism |
| LMO | Living modified organism |
| LMOs-FFP | LMOs intended for food, feed and processing |
| NEC | National Environment Commission |
| OECD | Organisation for Economic Co-operation and Development |
| SCBD | Secretariat of the Convention on Biological Diversity |

1. Introduction

1.1. Overview

A training workshop on the Bhutan Biosafety Clearing House (BBCH) and other biosafety repository tools was held at Tashi Namgay Resort, Paro, Bhutan from 3 – 5 March 2020. The objectives of having the training workshop were for the participants to: 1) obtain information and access to global Biosafety Clearing House (BCH), Food Agriculture Organization of the United Nations (FAO) GM Foods platform and Organisation for Economic Co-operation and Development (OECD) BioTrack product database to find relevant information in the context of Bhutan; 2) be trained on different global tools on biosafety; 3) be trained on step-by-step instructions to share required data and information on the national BCH tool; and 4) understand the relevant technical focal points in the country. The agenda of the workshop is attached as Annex 1.

The training workshop was attended by forty-five (45) officials from Bhutan Agriculture and Food Regulatory Authority (BAFRA) head office and field offices, Biosafety Technical Working Group members and representatives of relevant stakeholders including Ministry of Health (MoH), Department of Forests and Park Services (DoFPS), National Environment Commission (NEC), Food Corporation of Bhutan (FCB), Karma Feed and National Seed Centre (NSC). 78 percent were male thus the gender balance needs to be looked into for the next similar workshops. List of participants is attached as Annex 2.

1.2. Background

BAFRA was established under the Ministry of Agriculture and Forestry to implement sanitary, phytosanitary and biosecurity measures effectively to protect the health and life of humans, farming systems and the environment including the national biodiversity from risks of entry, establishment and spread of exotic pests, diseases and invasive alien species thereby promoting trade and ensuring healthy ecosystem.

Bhutan ratified the Cartagena Protocol on Biosafety (CPB) in August 2002 and Biosafety Act of Bhutan was passed in the year 2015 and its rules and regulations in 2018. Biosafety Act of the country prohibits any activities involving viable genetically modified organisms (GMOs) / living modified organisms (LMOs). The Biosafety Act is framed after careful consideration and in harmonization with the existing laws/policies of the Country. As per the obligation as a party to CPB, Bhutan housed the national BCH, entitled BBCH at NEC. However due to the change in the biosafety legislation, management of BBCH was transferred to BAFRA in early 2019. As such, in order to engage biosafety regulators, academia and food importers for exchange of scientific, technical, environmental and legal information on LMOs, BAFRA initiated the revamping process of the existing BBCH with the financial and technical support of FAO.

The updated BBCH includes new features for registering information, forums for online discussion, updated biosafety news and biosafety information repositories including the FAO GM Foods Platform, which will enable stakeholders and regulators to get information at one go for better decision making. To introduce the tools to the users and relevant stakeholders, a training workshop was organized.

2. Highlights of the training

2.1. Day one

After welcome remarks by Jambay Dorji, Senior Planning Officer and the focal for Biosafety, BAFRA and inaugural remarks by Dr Masami Takeuchi, Food Safety Officer, Food and Agriculture Organization of the United Nations (FAO) Regional Office for Asia and the Pacific (RAP), Thailand, participants were made aware of the objectives of training workshop, project background and training needs on the BCH. A quick pre-training quiz session was conducted. The results of the quiz is attached as Annex 3. Also, expectations of the participants were studied and consolidated as Annex 4. In general, the expectations can be grouped in 4 categories: 1) learning more about the Biosafety Clearing House; 2) being familiarized on national Biosafety Clearing House tool; 3) learning more on GMOs/LMOs and Cartagena Protocol on Biosafety; and 4) being familiarized on the use of biosafety information repositories.

Participants were then introduced to CPB and the obligations that parties are required to fulfill as a signatory to CPB. Participants were understood on the function of CBD, and the purpose of CPB, while they also were made familiar with Advance Informed Agreement procedures for intentional introduction into the environment, simplified procedure for LMOs intended for direct use as food or feed, or for processing, scope and application of the CPB. Interactive modules on CPB using the online modules provided by BCH were utilized to introduce the functioning of the CPB. The interactive session was followed by plenary session, wherein all participants jointly answered 20 quiz questions, the overall score obtained by the participants was 20/20.

An overview of the international biosafety repository tools including the FAO GM Foods Platform as significant food safety part of the global data repository system on biotechnology as well as the OECD BioTrack Product Database was presented by Dr Takeuchi where a brief demonstration to indicate the synergy with the global BCH as well as the national repository system was made. Online modules were further used for the participants to learn more about BCH (http://bch.cbd.int/help/topics/en/webframe.html?Training_Materials.html).

Participants were made aware that establishment of BCH is obligatory under CPB in order to facilitate the exchange of scientific, technical, environmental and legal information on, and experience with LMOs. As per the Protocol, parties are obliged to make certain information available through the BCH and also gives countries access to important information provided by other countries. The interactive session was followed by a plenary quiz session, wherein all participants jointly answered the 20 quiz questions and once again obtained a total score of 20/20. The facilitators demonstrated how to find information on BCH central portal and participants were divided into groups to learn through country case study as designed below:

1. a regulator from the Royal Government of Bhutan wishes to identify which maize varieties have been approved in South Asian Countries for direct use for food, feed and for processing;
2. the CPB National Focal Point of the Royal Government of Bhutan wants to review existing capacity building activities to identify possible opportunities for training of biosafety regulators; and

3. the Royal Government of Bhutan, as a party to the CPB, is in the process of registering national information in the BCH Central Portal (BCH-CP). In preparation for registering the country's existing laws, regulations, and guidelines, its BCH National Focal Point is seeking guidance as to the type of laws, regulations, and guidelines that were already published in the BCH-CP by South Asia countries.

Facilitators guided the conduct of the case study and found that participants were able to find the required information from the BCH. At the end of the day, a workshop navigation meeting was held to receive feedbacks on the conduct of the workshop from representatives from participant groups and it was useful in making the recommended changes by the secretariat to ensure day two is better than day one in terms of the conduct of the workshop. For example, on day one, participants felt that the seating arrangement did not favor group discussions so on day two, the secretariat changed the seating arrangement.

2.2. Day two

A representative from the participants was appointed to do the recap of day one which was well received and recommended for future workshops. A pre-recorded presentation on the content management system entitled "HERMES" provided by Secretariat of Convention on Biological Diversity (SCBD) was projected for the participants in preparation to the launch of the national repository tool. The official BBCH (<http://bt.biosafetyclearinghouse.net/>) was launched jointly by Dr Chador Wangdi, Officiating Director General of BAFRA, and Dr Takeuchi. After the launch of the live national BCH tool, through a demonstration session, the participants were familiarized on the old and new features of the tool. All the participants created an account on BCH central portal or the National BCH. Participants were informed of the different types of account users such as General User, National Authorized User and National Focal Point and their varying roles and access to information.

In the afternoon, the participants were divided into small groups and guided to work on a mock training site that has a similar look and feel of the BBCH website to provide feedback and inputs to incorporated on the national tool. Participants were given an access to get hands on experience on registering, editing and updating information on national BCH. They were also introduced to interaction between National Focal Point, National Authorized Users and general users and also demonstrated the interface between BCH central portal and national BCH website. The groups presented their work on registering and updating information in national BCH and BCH-CP. The participants provided suggest improvement plans which will be considered by the focal persons in discussion with the technical expert for the project as a follow-up to this training workshop which are listed as Annex 5. Few examples of the feedback are listed below:

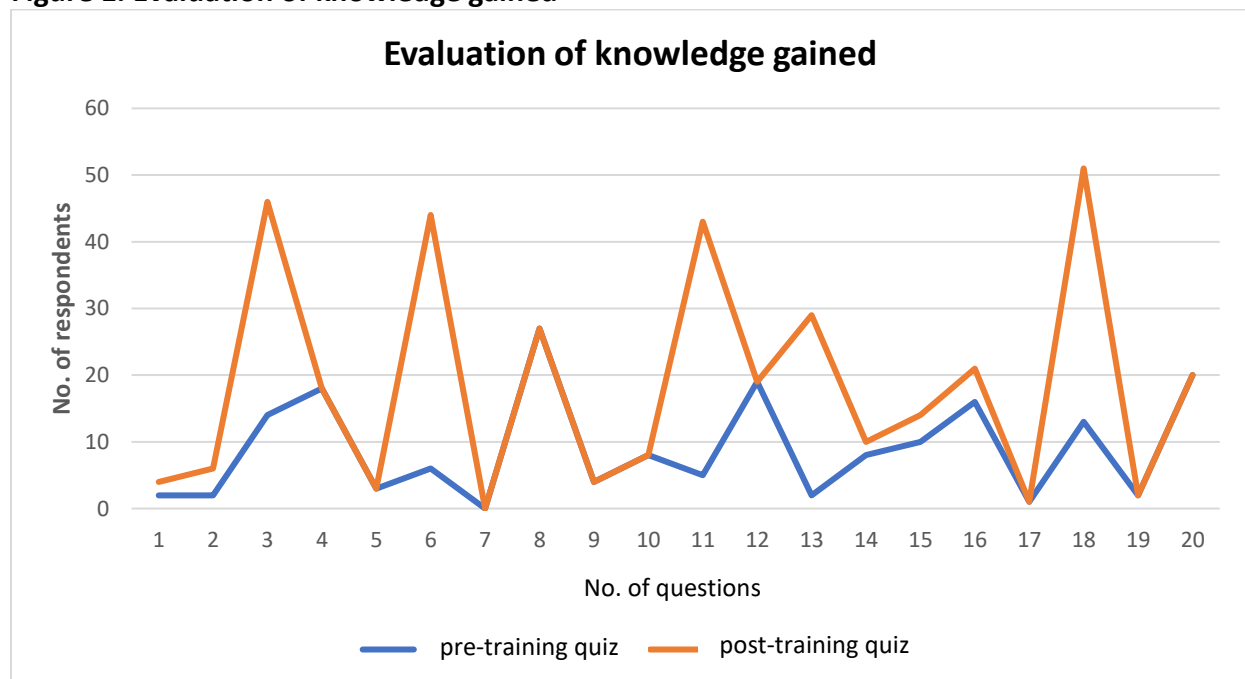
- add a search function on top right of the main page;
- add a "share information" tab so that registered members can easily share relevant information;
- include terms of references and short introductions of technical working group members;
- include Dzongkha text on the BBCH banner and delete "the" in the title;
- change the look and feel (color and themes) to synchronize it with the new global BCH website;

- create sub menu to the “law and Regulation” with 1) laws and regulations; 2) guidelines; and 3) acts; and
- develop a user guide with frequently asked questions (FAQs). The FAQs can be created based on the time-limited open forum to collect various questions from stakeholders and field officers.

2.3. Day three

Day three started with comprehensive recap of the day two by one of the volunteer participants. Feedback and comments on improving the existing tool was collected using a discussion thread on the real Bhutan BCH website entitled “Improving BBCH”. The compiled comments along with way forward are attached as Annex 5. After the feedback session, linking of BBCH to other biosafety global information tools such as central BCH, FAO GM Foods platform, OECD were discussed. The meeting was informed on the use of biosafety information available in such tools to help for instance in making regulatory decisions or in guiding the stakeholders to access the reliable information. Also, on the Bhutan BCH tool, the responsibilities of ‘general users’ and ‘national authorized user’ were mapped for registering and updating national information. To end the technical session, a post training quiz was conducted using the same set of questions from pre-training session to study the increase in knowledge gained. The quiz evaluation table is attached in Annex 6. Overall, the level of knowledge was increased as shown in the figure 1.

Figure 1. Evaluation of knowledge gained



3. Conclusions and recommendations

The Training workshop on Bhutan Biosafety Clearing House and other biosafety repository tools successfully launched the updated BBCH, and provided the participants with the opportunity to learn more about BCH and familiarize on the use and operation of BBCH to share relevant national data and information. Every participant created an account on BBCH and now trained to provide inputs. The training also allowed the participants to learn more

on GMOs/LMOs and the use of existing biosafety information repositories to implement the Cartagena Protocol on Biosafety. During this workshop, four good workshop techniques have been employed which were well received by the participants and are recommended for future workshops. These include:

1. workshop expectations were collected from the participants using *Sli.do* and analyzed in categories, and the list was used at the end of the workshop to collectively validate that those expectations have been met;
2. the knowledge gain through the workshop was assessed using the interactive pre-test and post-test quizzes. The assessment focused on the entire group rather than individual knowledge gain. Overall, the significant knowledge gain has been confirmed;
3. workshop navigation meetings were held at the end of each day to share the feedback on what points of the workshop can be instantly improved. The improvement points were implemented immediately for positive results. For example, workshop seating arrangement has been changed reflecting the navigation meeting discussion for better involvement of the participants, and also the composition of the working groups have been improved to have mixed stakeholders in the groups; and
4. participant volunteer was tasked to report the recap of the previous day's activities and discussion summary at the beginning of each day. In this way, participants were more focused and involved in each activity and they can obtain a good and detailed summary of the discussion on the next day. Such summaries positively contributed to the whole workshop and at the same time would be useful for report-writing.

Overall, the participants felt that the mixed method of training combining face-to-face sessions and self-paced online modules using virtual learning platforms were interactive and effective and would be recommended for future trainings. Apart from bringing together the biosafety regulators, biosafety Technical Working Group and stakeholders, the meeting provided the opportunity to network and discuss on a collective way forward, as presented below:

- continue the concerted efforts to work closely with relevant stakeholders in implementing Biosafety measures;
- contribute in strengthening biosecurity system in the country through active use of Bhutan BCH by the trained participants;
- continue to provide similar training workshops to keep abreast of the new developments in the area of food biotechnology;
- the Bhutan BCH will be updated as per the recommendations from the participants; and
- a draft report of the training will be shared with participants for comments.

4. Evaluation

Logistic and quality of the training workshop was evaluated as per the evaluation form, as attached in Annex 7. The participants expressed satisfactory experience; the positive feedback received from the participants is summarized in the scale of one (not satisfactory) to five (highly satisfactory) as below:

- information received about this training (4.7);
- subject matter of this training was clearly communicated in the agenda (4.7);

- the time allocated to the workshop sessions (4.8);
- opportunity provided for discussion (4.9);
- access to training materials (4.7);
- the CPB training materials (4.7);
- the BCH training materials (4.7);
- finding information on the BCH (4.4);
- BCH information registering (4.7);
- other biosafety repository tools (4.5);
- introduction to national BCH system (4.7);
- the general performance of the facilitators (4.8);
- the usefulness of the workshop virtual learning environment (4.8); and
- layout and seating of the room, general venue facilities, workshop logistics and organization (4.7).

Annex 1. Agenda of the training workshop

3 March 2020

| Time | Agenda | Speaker(s) |
|---------------|---|--|
| 08.30 – 09.00 | Registration | |
| 09.00 – 09.15 | Welcome remarks | Jambay Dorji Masami Takeuchi |
| 09.15 – 09.20 | Project background and training needs | Jambay Dorji |
| 09.20 – 09.25 | Objectives of the meeting | Yoenten Phuentshok |
| 09.25 – 09.35 | Quiz Session | Tashi Yangzom |
| 09.35 – 09.45 | Expectations | Yoenten Phuentshok |
| 09.45 – 10.00 | Introduction to Cartagena protocol on biosafety and parties' obligations Q&A | Jambay Dorji |
| 10.00 – 10.30 | Group photo and tea/coffee break | |
| 10.30 – 11.30 | Interactive module on Cartagena Protocol on Biosafety Q&A | Facilitated by BAFRA |
| 11.30 – 12.00 | FAO GM Foods Platform and OECD BioTrackProduct Database Q&A | Masami Takeuchi |
| 12.00 – 13.00 | Biosafety Clearing House as a global tool Q&A | Facilitated by BAFRA |
| 13.00 – 14.00 | Lunch | |
| 14.00 – 14.30 | Demonstration: Surfing the central portal and finding information on BCH | Jambay Dorji and Tashi Yangzom |
| 14.30 – 15.00 | Group Work 1: Finding key information on Biosafety Clearing House – country cases | Case study customized by Ruel and delivered by Tashi Yangzom |
| 15.00 – 15.30 | Tea/coffee break | |
| 15.30 – 16.30 | Continuation of Group work 1 followed by presentation. | Facilitated by Jambay Dorji and Tashi Yangzom |
| 16.30 – 16.45 | Conclusion of day one and Workshop Navigation meeting | Tashi Yangzom |

4 March 2020

| Time | Agenda | Speaker(s) |
|---------------|--|--|
| 09.00 – 09.10 | Recap of Day one | Volunteer |
| 09.10 – 09.30 | A brief introduction on Hermes | Prepared by Dr Ruel and delivered by Tashi Yangzom |
| 09.30 – 09.45 | Registering account on BCH | Jambay Dorji and Tashi Yangzom |
| 09.45 – 10.00 | National Biosafety Clearing House – official launch of the portal | Prepared by Dr Ruel and delivered by Tashi Yangzom |
| 10.00 – 10.30 | Demonstration: familiarization with the national BCH tool and its components | Tashi Yangzom |

| | | |
|---------------|---|--|
| 10.30 – 11.00 | Tea/coffee break | |
| 11.00 – 11.45 | Demonstration: Registering and updating information on the national BCH | Tashi Yangzom |
| 11.45 – 12.30 | Group work 2: Registering and updating information on national BCH | Prepared by Dr Ruel and delivered by Tashi Yangzom |
| 12.30 – 13.00 | Discussion on information type and process of registering information on national BCH | Facilitated by Masami Takeuchi |
| 13.00 – 14.00 | Lunch | |
| 14.00–15.00 | Group Work 3: Registering Information in the BCH Central Portal | Jambay Dorji and Tashi Yangzom |
| 15.00 – 15.30 | Tea/coffee break | |
| 15.30 – 16.30 | Presentations on the outcome of Group Work 2 & 3 | Group representatives |
| 16.30 – 16.45 | Conclusion of day two followed by the Workshop Navigation meeting | Jambay Dorji |

5 March 2020

| Time | Agenda | Speaker(s) |
|---------------|--|---|
| 09.00 – 09.10 | Recap of Day two | Volunteer |
| 09.10 – 10.30 | Discussion to obtain recommendations on national biosafety repository tools and feedback from the participants | Facilitated by Jambay Dorji |
| 10.30 – 11.00 | Tea/coffee break | |
| 11.00 – 11.30 | Discussion on linking to the global tools (global BCH, FAO, OECD tools) | Facilitated by Masami Takeuchi |
| 11.30 – 12.00 | Mapping of the responsibilities as General User and National Authorized User | Facilitated by Jambay Dorji and Tashi Yangzom |
| 12.00 – 12.30 | Conclusions and a way forward for the national BCH as well as the project | Jambay Dorji |
| 12.30 – 12:45 | Evaluation of training | Facilitated by Jambay Dorji |
| 12:45 – 13.30 | Closing and presentation of the certificates | BAFRA/MoAF |
| 13:30 –14:30 | Lunch | |
| 14:30 –17:00 | Meeting with BAFRA officials on administrative issues | BAFRA Management |

Annex 2. List of participants

| # | Name | Designation | Offices |
|-----|------------------------|---|--|
| 1. | Sonam Tenzin | Assist Regulatory and Quarantine Officer | Bumthang, BAFRA |
| 2. | Tsheten Khandu | RQI | Chukha, BAFRA |
| 3. | Chenga Tshering | Regulatory and Quarantine Officer | Gasa, BAFRA |
| 4. | Ugyen Tshering | Sr. Regulatory and Quarantine Inspector | Haa, BAFRA |
| 5. | Yeshi Nidup | Sr. Regulatory and Quarantine Inspector | Lhuntshi, BAFRA |
| 6. | Damcho Norbu | Sr. Regulatory and Quarantine Inspector | Mongar, BAFRA |
| 7. | Dechen Dema | Sr. Regulatory and Quarantine Inspector | Paro, BAFRA |
| 8. | Dorji Letho | Regulatory and Quarantine Inspector | Pemagatsetel, BAFRA |
| 9. | Sonam Tshering | Sr. Regulatory and Quarantine Inspector | Punakha, BAFRA |
| 10. | Sherab Phunstho | Sr. Regulatory and Quarantine Officer | Samdrup Jongkhar, BAFRA |
| 11. | Kinzang Chhodon | Lab Assistant | Samtse, BAFRA |
| 12. | Sonam Dendup | Regulatory and Quarantine Inspector | Sarpang, BAFRA |
| 13. | Yeshi Pelzang | Regulatory and Quarantine Inspector | Tashiyangtshi, BAFRA |
| 14. | Tashi | Regulatory and Quarantine Inspector | Thimphu, BAFRA |
| 15. | Pema Jamtsho | Sr. Regulatory and Quarantine Inspector | Trashigang, BAFRA |
| 16. | Chador Gyeltshen | Sr. Regulatory and Quarantine Inspector | Trongsa, BAFRA |
| 17. | KB Mongar | Sr. Regulatory and Quarantine Inspector | Tsirang, BAFRA |
| 18. | Sonam Choden | Sr. Regulatory and Quarantine Inspector | Wangdiphodrang, BAFRA |
| 19. | Tshewang Dorjee | Sr. Regulatory and Quarantine Inspector | Zhemgang, BAFRA |
| 20. | Lham Dorji | Sr. Regulatory and Quarantine Inspector | Gelephu, BAFRA |
| 21. | Nima Tshering Lepcha | Regulatory and Quarantine Inspector | Gomtu, BAFRA |
| 22. | Phuntsho Wangdi | Regulatory and Quarantine Inspector | Jomotshangkha, BAFRA |
| 23. | Gyembo Dorji | Sr. Regulatory and Quarantine Inspector | Lhamoiyzingkha, BAFRA |
| 24. | Dorji Lhamo | Sr. Regulatory and Quarantine Inspector | Gyelposhing, BAFRA |
| 25. | Thinley Penjor | Sr. Regulatory and Quarantine Inspector | Nganglam, BAFRA |
| 26. | Nim Dorji | Sr. Regulatory and Quarantine Inspector | Phuntsholing, BAFRA |
| 27. | Sonam Dorji | Sr. Regulatory and Quarantine Inspector | Panbang, BAFRA |
| 28. | Sangay Tshering Lepcha | Sr. Regulatory and Quarantine Inspector | Samrupcholing, BAFRA |
| 29. | Shacha Singye | Sr. Regulatory and Quarantine Inspector | Wamrong, BAFRA |
| 30. | Sherab Zangpo | Sr. Regulatory and Quarantine Inspector | Gedu, BAFRA |
| 31. | Parkash Tamang | Sr. Regulatory and Quarantine Inspector | Livestock, BAFRA, Thimphu |
| 32. | Gyem Bidha | Dy. Chief Regulatory and Quarantine Officer | Food Section, BAFRA, Thimphu |
| 33. | Karma Jamtsho | ICTA | IT Section, BAFRA, Thimphu |
| 34. | Mani Prasa Nirola | Sr. Biodiversity Officer | Biosafety technical working group, National Biodiversity |

| | | | |
|-----|--------------------|--|--|
| | | | Center, Ministry of Agriculture & Forests, Serbithang |
| 35. | Dechen Wangmo | Sr. Laboratory Officer | Biosafety technical working group, NFTL, Yusipang, BAFRA |
| 36. | Yeshi Dorji | Environment Officer | National Environment Commission, Thimphu |
| 37. | Ugyen Wangmo | Horticulture Officer | ARDC, Yusipang, DoA, MoAF |
| 38. | Pasang W. Norbu | Specialist | Biosafety technical working group, Department of Forests and Park Services, Ministry of Agriculture & Forests, Thimphu |
| 39. | Dorji Wangda | Sr. Agriculture Officer | National Seed Center, DoA, Paro |
| 40. | Dorji Wangchuk | Quality Manager | FCB, Phuentsholing |
| 41. | Kinley Pemo | Quality Manager | Karma Feed, Phuentsholing |
| 42. | Tashi Yangzom | Sr. Regulatory and Quarantine Officer | Resource Person, BAFRA, Thimphu |
| 43. | Jambay Dorji | Sr. Planning Officer | Resource Person, BAFRA, Thimphu |
| 44. | Masami Takeuchi | Food Safety Officer | Resource Person/FAO |
| 45. | Yoenten Phuentshok | Junior Professional Officer for One Health | Resource Person/FAO |

Annex 3: Quiz questions and answers

1. When did Bhutan ratify the Cartagena Protocol on Biosafety?

- Option 1: 2001
- Option 2: 2002
- Option 3: 2003
- Option 4: Rather not answer

2. What is the basis of the safety assessment information shared on FAO GM Platform?

- Option 1: Peer reviewed safety assessment reports
- Option 2: Principles and guidelines developed by the Codex Alimentarius Commission
- Option 3: Principles and guidelines patented by the biotech industries
- Option 4: Rather not answer

3. What is OECD unique identifier?

- Option 1: is a code of a fixed length of 6 alphanumeric digits for a product derived from recombinant DNA techniques.
- Option 2: is a code of a fixed length of 7 alphanumeric digits for a product derived from recombinant DNA techniques.
- Option 3: is a code of a fixed length of 9 alphanumeric digits for a product derived from recombinant DNA techniques.
- Option 4: Rather not answer

4. As per CPB, what procedure is followed for LMOs intended for intentional introduction into the environment?

- Option 1: Advance Informed Agreement procedure
- Option 2: Simplified procedure based on multilateral information exchange for the transboundary movement of LMOs-FFP
- Option 3: Risk assessment at the border point
- Option 4: Rather not answer

5. As per CPB, what procedure is followed for LMOs intended for food, feed and processing?

- Option 1: Advance Informed Agreement procedure
- Option 2: Simplified procedure based on multilateral information exchange for the transboundary movement of LMOs-FFP
- Option 3: Risk assessment at the border point
- Option 4: Rather not answer

Annex 4: Expectations of the participants

1. To learn more on BCH
2. To know more about BCH
3. To learn more about BCH
4. To understand fully on BCH
5. The objective of BCH
6. To fully understand on BCH
7. Learn BCH protocols in future
8. To know more about biosafety
9. I would like to know the background of the Bio safety, it's purpose and on how to advance further.
10. I think I will have more knowledge on biosafety and know more about NBCH to know what are the biosafety protocols that we need to follow
11. More information on biosafety and its reality
12. Biosafety protocol on National security
13. Learn right Biosafety tool information for finding required information
14. Update and understand on Biosafety tool
15. Know more about Biosafety issues as outlined in CPB Learn to use BCH Codex guidelines
16. Contact Focal person for various information types
17. More on LMO, GMO, Cartagena protocol on Biosafety
18. Know how to share information on Biosafety
19. Understand the information sharing mechanism on biosafety related tool
20. How to upload information in the NBCH
21. What are the information to be uploaded?
22. Expected to learn on the exchange and sharing information on LMOs in Global Reach
23. I hope to learn more on LMO
24. To learn and understand more about national bio safety clearing house
25. To learn and understand more NBCH
26. To understand more on NBCH tool
27. To learn and understand more about NBCH
28. To learn and understand more about National Biosafety Clearing House
29. To be relatively versed on the NBCH tool
30. To understand and learn about national bio safety clearing house
31. Wanted to learn on bch to implement the task in the field

Annex 5: Feedback on improving the Bhutan BCH

| Sl.# | Feedback | Follow-up action |
|------|---|--|
| 1 | Create a Help button | Consult Dr. Ruel |
| 2 | Create a Search function on top right of the page | Consult Dr. Ruel |
| 3 | Technical working group – Terms of References and short introduction of technical working group members to be included | Can be done by BAFRA |
| 4 | Dzongkha text on the BBCH banner and resize the banner to match the page | Redesign BAFRA logo with better resolution |
| 5 | Consider color / themes of the tool similar to the new BCH web | Consult Dr. Ruel |
| 6 | Categorize the Law and Regulation sub menu into categories like; <ul style="list-style-type: none"> a. Laws and regulations b. Guidelines c. Acts | Consult Dr. Ruel |
| 7 | Correct 'the' and hyphen from the banner and improve the banner | Consult Dr. Ruel |
| 8 | Update Laws and Regulations column with the latest relevant documents/ The documents on the laws and regulations needs to be screened so that only relevant laws and regulations are put there. | Consult Dr. Ruel |
| 9 | How is the possibility of linking with overall Clearing-House Mechanism of Convention on Biological Diversity of Bhutan? | Consult Dr. Ruel |
| 10 | Adjust (increase) font size of the contents | Consult Dr. Ruel |
| | Prepare a brief user guide of BBCH | Consult Dr. Ruel |
| 11 | Option for 'provide information' or 'share information' | Consult Dr. Ruel |
| 12 | The biosafety news would be better presented chronologically from the newer to the older | Can be done by BAFRA |

Annex 6: Quiz evaluation table

| Question # | Answer Options | Remarks | Responses for Pre-training Quiz from 36 participants | Responses for Post-training Quiz from 38 participants |
|------------|----------------|---------------------|--|---|
| 1 | 1 | | 2 | 2 |
| | 2 | Correct Answer | 2 | 4 |
| | 3 | | 14 | 32 |
| | 4 | Chose not to answer | 18 | 0 |
| 2 | 1 | | 3 | 0 |
| | 2 | Correct Answer | 6 | 38 |
| | 3 | | 0 | 0 |
| | 4 | Chose not to answer | 27 | 0 |
| 3 | 1 | | 4 | 0 |
| | 2 | | 8 | 0 |
| | 3 | Correct Answer | 5 | 38 |
| | 4 | Chose not to answer | 19 | 0 |
| 4 | 1 | Correct Answer | 2 | 27 |
| | 2 | | 8 | 2 |
| | 3 | | 10 | 4 |
| | 4 | Chose not to answer | 16 | 5 |
| 5 | 1 | | 1 | 0 |
| | 2 | Correct Answer | 13 | 38 |
| | 3 | | 2 | 0 |
| | 4 | Chose not to answer | 20 | 0 |

Annex 7: Training evaluation form

| How do you rate the following: | Low | | | | High |
|--|-----|---|---|---|------|
| | 1 | 2 | 3 | 4 | 5 |
| 1. Information received about this training | | | | | |
| 2. The subject matter of this training was clearly communicated in the agenda | | | | | |
| 3. The time allocated to the workshop sessions | | | | | |
| 4. Opportunity provided for discussion | | | | | |
| 5. Access to training material (training aids, online training materials, interactive modules etc.) | | | | | |
| 6. The CPB training materials (presentation, video, interactive module, etc) | | | | | |
| 7. The BCH training materials (presentation, manuals, interactive modules, case studies, etc) | | | | | |
| 8. Finding Information in the BCH (presentations, case studies, quick reference guides, etc) | | | | | |
| 9. BCH Information Registering (Presentations, manual MO06, case studies) | | | | | |
| 10. Other Biosafety Repository Tools (FAO-GM Foods Platform, OECD BioTrack Database, ICGEB, etc) | | | | | |
| 11. Introduction to National BCH System (SCBD tool: HERMES) and Practical Sessions on Registering Information in the National BCH System (Bhutan Biosafety Clearing House) | | | | | |
| 12. The general performance of the facilitators? | | | | | |
| 13. The usefulness of the workshop Virtual Learning Environment (VLE) | | | | | |
| 14. Layout and seating of the room, general venue facilities, workshop logistics, and organization | | | | | |

Food and Agriculture Organization of the United Nations
Representation in Bhutan
UN House, Peling Lam Kawangjangsa Thimphu – 11001 Bhutan
Email:FAO-BT@fao.org

