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INFORMAL ADVISORY COMMITTEE TO THE ACCESS AND BENEFIT-SHARING CLEARING-HOUSE

Fourth meeting

Montreal, Canada, 2-4 December 2019

Items 3, 4 and 5 of the provisional agenda*

REPORT ON PROGRESS IN THE IMPLEMENTATION AND ADMINISTRATION OF THE ACCESS AND BENEFIT-SHARING CLEARING-HOUSE

Note by the Executive Secretary

I. INTRODUCTION

1. Article 14 of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization establishes an Access and Benefit-sharing Clearing-House (ABS Clearing-House or ABS-CH) as part of the clearing-house mechanism under Article 18, paragraph 3, of the Convention on Biological Diversity.
2. At its first meeting, the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol established an informal advisory committee to assist the Executive Secretary with the implementation of the ABS Clearing-House and to provide technical guidance with respect to the resolution of technical and practical issues arising from its ongoing development.
3. At its third meeting, the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol decided that the Informal Advisory Committee would hold at least one meeting and informal online discussions, as needed, during the intersessional period 2019-2020 and report on the outcomes of its work to the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol at its fourth meeting (see [decision NP-3/3](#), para. 8). The meeting of the Informal Advisory Committee will be held in Montreal, Canada, from 2 to 4 December 2019.
4. Section II below provides an overview of progress made in the implementation and administration of the ABS Clearing-House with regard to a number of issues and on the basis of the list of goals and priorities contained in the annex to [decision NP-3/3](#). Section III provides progress made in the implementation of the Protocol's system to monitor the utilization of genetic resources through the ABS Clearing-House, including an analysis of the internationally recognized certificates of compliance (IRCCs) and checkpoint communiqués available in the ABS Clearing-House. Finally, section IV proposes priority activities for further implementation and administration of the ABS Clearing-House.

II. PROGRESS REPORT ON THE IMPLEMENTATION AND ADMINISTRATION OF THE ACCESS AND BENEFIT-SHARING CLEARING-HOUSE

5. This section takes stock of progress made by the Secretariat of the Convention in the implementation and administration of the ABS Clearing-House since the last progress report presented to the Parties at their third meeting ([CBD/NP/MOP/3/8](#)).
6. The following presents an overview of progress made based on:

* CBD/NP/ABSCH-IAC/2019/1/1.

(a) The goals and priorities for further development and administration of the ABS Clearing-House, contained in the annex to [decision NP-3/3](#);

(b) Feedback received, in particular from Parties;

(c) The technical guidance provided by the Informal Advisory Committee to the ABS Clearing-House.

A. Population and increased use of the information available on the ABS Clearing-House (Goal 1)

7. The importance of increasing amount and use of information contained in the ABS Clearing-House, and in particular, the information that exists at the national level and that Parties must make available in accordance with the Protocol, has been stressed by the Parties serving as the meeting of the Parties to the Nagoya Protocol through numerous decisions. These decisions¹ continue to underscore the crucial link between the information-sharing obligations of Parties through the ABS Clearing-House and the successful implementation of the Protocol. They also highlight the need for Parties to be aware of the key role the ABS Clearing-House plays in the implementation of the Protocol and to have the capacity to use and populate it with the required information.

8. Over the year period, from 1 October 2018 to 1 October 2019, the total number of published national records has more than doubled growing from 884 to 1923 records, with 1040 new records published including information on 882 permits or their equivalents to constitute IRCCs. In the same period, the number of reference records also grew from 213 to 296 records, with 83 new records published. In roughly the same period, the number of Parties to the Protocol has increased by 12 to total 120 Parties; likewise, the number of Parties publishing records, as seen in table 2, has also slightly increased.

Table 1. Number of records published in the ABS Clearing-House

<i>Record type</i>	<i>Total records as of 1 October 2019</i>	<i>Number of records published from 1 Oct 2018 to 1 Oct 2019</i>
National records		
ABS national focal points	167	55
Competent national authorities	110	31
ABS measures	325	36
ABS procedures	8	8
National model contractual clauses	1	1
Checkpoints	51	1
Internationally recognized certificates of compliance	1 107	882
Checkpoint communiqués	15	10
National websites or databases	47	5
Interim national reports	92	11
Total	1 923	1 040
Reference records		
Virtual library resource	86	25
Capacity-building initiative	79	7
Capacity-building resource	100	41
Model contractual clauses, codes of conduct, guidelines, best practices and/or standards	21	3
Community protocols and procedures and customary laws	10	7

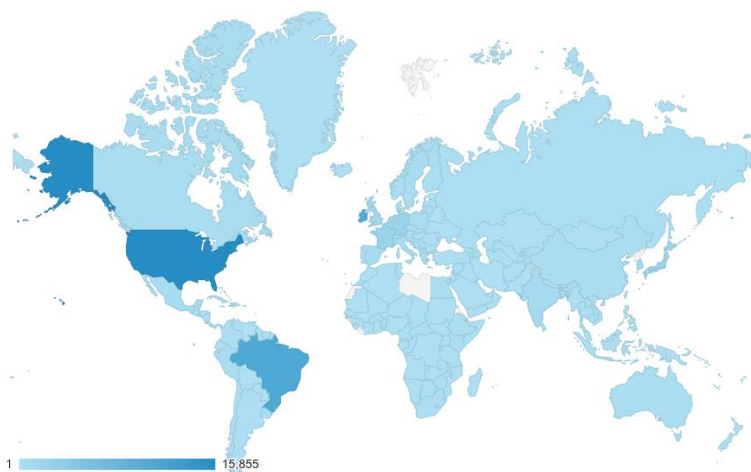
¹ Decisions NP-3/1, NP-3/3, NP-3/5, NP-3/6.

Total	296	83
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Table 2. Number of Governments publishing national records

<i>Record type</i>	<i>Number of governments publishing records before 23 August 2018 (108 Parties)</i>		<i>Number of governments publishing records as of 1 Oct 2019 (120 Parties)</i>	
	Parties	Non-Parties	Parties	Non-Parties
Competent national authorities	50	9	63	5
ABS measures	50	5	60	4
ABS procedures	0	0	6	1
National model contractual clauses	0	0	1	0
Checkpoints	24	1	25	1
Certificates (IRCC)	12	0	18	0
Checkpoint communiqués	3	0	5	0
National websites or databases	27	4	33	2

9. During the period from 1 October 2018 to 1 October 2019, most of the visits to the ABS Clearing-House originated from the following countries: Belgium, Brazil, France, Germany, Ireland, Japan, Singapore, Republic of Korea, United Kingdom of Great Britain and Northern Ireland, and United States of America. During this period, the ABS Clearing-House received a total of 104,000 visits from 72,333 users, adding to the grand total of 269,588 visits from 132,596 users since it was launched on 12 October 2014.

Figure 1. Sessions by location (1 October 2018 to 1 October 2019)

Note: The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations.

1. Outreach and engagement

10. In order to increase engagement with the ABS Clearing-House, the Secretariat has been carrying out a number of capacity-building and awareness-raising activities.

(a) Issue tracking and follow-up

11. The Secretariat has continued to provide proactive outreach and technical support focusing primarily on assisting Parties in achieving their information sharing obligations set out by the Protocol. This outreach focuses on welcoming new Parties, encouraging designation of a publishing authority, and encouraging the publication of information available at the national level, in particular the relevant

information on permits, legislative, administrative or policy measures, procedures, and competent national authorities.

12. In order to improve its outreach efforts, the Secretariat has been tracking potentially available information as well as flagging issues or problems found that may obscure the clarity of the information found in the published national records. This information is gathered and stored in an issue tracking system,² which is used in order to help us to provide consistent and thorough follow-up and support and encourage the publication of clear and reliable information.

13. The issues that are input into the tracking system come from several sources, for example, some have been reported by national users either in conversations (email, phone, in-person) or through the submission of their interim national reports. Many of the issues relate to improving the clarity and reliability of the information available and have been a result of the Secretariat's work to review published records. To date, national published records from about 100 countries have been reviewed in order to identify errors and make suggestions to improve the understandability of the information provided.

14. As of September 2019, the issue tracking system displayed information on issues in 84 countries, which include 166 instances in which a country may likely have information available but has not yet published it, 95 reminders to follow up with ABS national focal points and publishing authorities on "soon to be available" information, and 69 records that have been flagged as having potential for improvement and clarification.

15. Each open issue will be proactively followed up by the ABS Clearing-House team with the country's ABS national focal point and publishing authority, as appropriate, until the issue is satisfactorily resolved and closed.

(b) *On-demand technical support*

16. The ABS Clearing-House help desk also provides users with on-demand technical support through live chat, email and Skype/webinars.

(c) *Live chat*

17. The number of users of the live chat has decreased over the last year, a trend which may be attributed to the enhanced accessibility of the ABS Clearing-House, user guides and familiarity of users with the platform. A total of 62 questions were received between November 2018 and September 2019. The feedback received from users on this service is still very positive.

18. Users of the live chat are unknown unless they are signed in to the website or identify themselves during the conversation. However, of the identifiable users, between the period of November 2018 and September 2019, approximately 40 per cent of the questions came from Government representatives, 11 per cent from researchers and academia, 7 per cent from organizations and only 5 per cent from the private sector.

(c) *Email*

19. A significant number of requests for support were sent directly to the ABS Clearing-House email address (absch@cbd.int). During the period from September 2018 to September 2019, the ABS Clearing-House help desk account received about 350 emails which included questions or requests for technical assistance to use the ABS Clearing-House.

20. In examination of the information submitted both through live chat and email, the majority of questions come from countries in the Western Europe and Others Group (approximately 47 per cent), followed by Latin American and the Caribbean countries (approximately 18 per cent), Asia and the Pacific (approximately 17 per cent), Africa (approximately 14 per cent) and Central and Eastern Europe (4 per cent). Regarding the types of questions received, approximately 77 per cent were requests for

² JIRA - <https://www.atlassian.com/software/jira>

technical assistance,³ approximately 9 per cent were requests for general information,⁴ approximately 5 per cent were general questions related to access to genetic resources or associated traditional knowledge,⁵ 5 per cent of questions are about the scope of application of the Protocol⁶ and approximately 4 per cent are requests on how to find information about a specific country.⁷

2. *Capacity-building*

21. The need for capacity-building for the use of the ABS Clearing-House was stressed by Parties in a number of decisions adopted at the fourteenth meeting of the Conference of the Parties and the third meeting of the Parties to the Nagoya Protocol.

(a) *Workshops and trainings*

22. Since the third meeting of the Parties to the Protocol, the Secretariat has conducted 10 remote capacity-building trainings for the use of the ABS Clearing-House and 5 face-to-face capacity-building trainings at workshops.⁸

23. In addition, the Secretariat organized a global capacity-building workshop on monitoring the utilization of genetic resources under the Nagoya Protocol. The workshop was held in Bonn from 30 September to 2 October 2019, with generous financial support provided by the Governments of Japan (through the Japan Biodiversity Fund), the European Union, and the Government of Germany (BfN). The three-day workshop provided face-to-face training to representatives of about 54 countries. The report of the workshop and other information can be found on the CBD meeting webpage: <https://www.cbd.int/meetings/NP-CB-WS-2019-01>.

(b) *Dissemination of capacity-building resources for the use of the ABS Clearing-House*

24. Capacity-building material for the ABS Clearing-House is disseminated through ABS Clearing-House and through capacity-building and outreach activities by the Secretariat whenever possible. The table below shows the number of downloaded capacity-building materials for the use of the ABS Clearing-House and available on the ABS Clearing-House.

25. Two new step-by-step guides have been added for ABS Procedures and National Model Contractual Clauses. The ABS Clearing-House e-learning module⁹ has also been made available on the SCBD e-learning portal in English, French and Spanish. The e-learning module can also be used offline and is available for download as well.

³ This includes issues related to bugs or technical errors, browser compatibility and questions on how to perform certain actions in the ABS Clearing-House (for example, “how can I add a contact to an existing format?” or “I cannot log in to my account”).

⁴ Questions about finding information on the ABS-CH or website, about the ABS Clearing-House, and others (for example, “where can I find ABS case studies?”).

⁵ For example, “What do I need to do for accessing a genetic resource?”

⁶ Questions on how the Nagoya Protocol applies to a specific case, what the Protocol provides, or issues related to obligations of Parties to the Protocol (for example, “Does the Nagoya Protocol apply to cultivated plants?” or “do all Parties to the Nagoya Protocol have legislation in place?”).

⁷ For example, “Does Country X have legislation on X?”

⁸ Face-to-face trainings include: 1) MOP3 ABSCH Workshop (SCBD); 2) Community of Practice Workshop on the Nagoya Protocol on Access and Benefit-Sharing for European, CIS, Arab and Asian countries (UNDP-GEF Global ABS Project); 3) The 12th Pan African ABS Workshop (ABS Capacity-building Initiative); 4) India ABSCH API Training (SCBD); 5) Kenya ABSCH API Training (SCBD).

⁹ <https://absch.cbd.int/database/VLR/ABSCH-VLR-SCBD-248292>

Table 3. Number of downloads of capacity-building material for the use of the ABS Clearing-House (1 October 2018 to 1 October 2019)

<i>Title</i>	<i>Link</i>	<i>Total downloads or views</i>
About the ABSCH An overview of the important concepts and functionalities related to the ABS Clearing-House	https://absch.cbd.int/about/ https://www.cbd.int/abs/en/ABSCHGuide.pdf	4724
Step-by-step guides Detailed steps to follow in order to publish each information type on the ABS Clearing-House	https://absch.cbd.int/about/guides	526
Frequently asked questions (FAQs) A list of common questions and answers related to the ABS Clearing-Houses	https://absch.cbd.int/about/faqs	115
Offline common formats Formats for all ABS Clearing-House records.	https://absch.cbd.int/about/offline	161
ABSCH e-learning module An interactive overview of the important concepts and functionalities related to the ABS Clearing-House	https://absch.cbd.int/database/VLR/ABSC H-VLR-SCBD-248292	Information not yet available

3. Interoperability and collaboration

26. Over the same reporting period, from 1 October 2018 to 1 October 2019, the Secretariat has received and addressed a number of requests from Parties¹⁰ for technical advice and assistance related to interoperability with the ABS Clearing-House. Most requests relate to publishing of permits as certificates from national permit databases and systems. The Secretariat has also conducted two face-to-face trainings for developers to connect the ABS Clearing-House to national systems.

27. The ABS Clearing-House's application programming interface (API), the main interoperability mechanism, is a set of functions and procedures, also all endpoints, that allow applications and systems to have access to the data and interact with the services of the Clearing-House. For example, the API can be used by an external website to provide a list of countries that are Parties to the Protocol. In order to do this, the website would call the specific API function or endpoint that has been designed to provide this information from the database. The API would return raw data, which could then be transformed by the website running in the browser to display a user-friendly table of Parties to the Protocol.

28. A recent analysis of the ABS Clearing-House's security and performance highlighted a number of ways in which the API can be improved to increase performance and user-friendliness. The most effective way to do this is to reduce the number of API function calls needed to carry out a particular action. For example, publishing a record may require the application to know if the user is signed in or not. Then, it may also need to know what roles and permission the user has been assigned. Then, it may need to know if the data provided fits correctly with the common format of the record. It may need other information that is all provided through a number of specific API functions that the website calls on to provide the communication between the systems in order carry out each of these steps. However, in many cases, these steps are taken in order to accomplish a certain task, and many API functions and steps could be combined and simplified to reduce the number of functions needed to carry out a common task.

29. As the Secretariat gains experience with the system for monitoring utilization through the ABS Clearing-House how the API is being used has become clearer. A number of Governments have shown

¹⁰ Spain, France, European Union, India, Ethiopia, Kenya and Seychelles.

interest in setting up information technology systems to manage permits, and these systems need to be connected to the ABS Clearing-House, in order to automate the publication of certificates and facilitate monitoring utilization. Capacity-building partners, such as the ABS Capacity Development Initiative, have started working on projects with a number of countries to support the implementation of their national systems and it is necessary for these systems to be connected to the ABS Clearing-House. To satisfy the growing demand, continued efforts to improve, simplify, and document the API usage and functions can support countries and partners in connecting their systems with the ABS Clearing-House.

30. Recently, users have been provided with a “low-tech” option for interoperability with external permit management systems by allowing national users to submit draft certificates in bulk for publishing through an Excel template. A number of countries, including Ethiopia and France, have used this or will be using it as an interim method to publish their certificates.

31. As the Secretariat continues to improve the API, it is very important to have a clear picture of the API functions that are being used and which external systems are connecting to them. Currently, for example, since the ABS Clearing-House uses its own API, it is not easy to know if a record was published from an external system through interoperability or if it was published through the ABS Clearing-House’s own website. Improving the system in order to collect and track this type of information is essential to ensure the smooth operation of interconnected systems, which will be especially useful in the event of a malfunction or when a particular API function is changed or updated, in order to be able to notify those affected.

32. Currently, the ABS Clearing-House is being used regularly by at least four external systems to publish information, and three external applications have used the API in temporary projects to display information. However, the Secretariat has this information only because it has been contacted for support in setting up these systems. Since the Secretariat openly provides information about its API endpoints, it is difficult to determine how many external applications have in fact been using the API without contacting the Secretariat first. In order to resolve this issue, many websites that provide APIs, such as Facebook or Twitter, require developers and applications to register for a developer account so that they can control access to the API, and use by external applications can then be tracked. Signing up for a developer account can be as simple as signing up for a new CBD user account. In this regard, it should be noted that the API is bound to the same security and requires the same publishing procedures – such as approval from the publishing authority to make information available – as the ABS Clearing-House website.

B. Translation and functionality for operationalizing the ABS Clearing-House in the six official languages of the United Nations (Goal 2)

33. Translation of the website has been a priority in order to facilitate and encourage the publication of information in the ABS Clearing-House by all Parties, other Governments and partners. Most of the website has now been translated into the six official languages of the United Nations, including at least 75 per cent of submission forms and other web pages.

34. In addition, the mechanism for managing translation has been partially built. Some manual work is still needed in the meantime until the automated mechanism is completed. The improved mechanism automatically fetches the files that have been modified since the last deployment of the website. The returned files can be run through the translation memory, and, when additional translation is needed, the files are automatically packaged and sent to translators through the Trados software for completion. When the translations are received from the translators, they need to be manually repackaged and redeployed on the website. Thus, some work is still needed before the entire process can be automated.

35. Some of the integration with the Biosafety Clearing-House has caused minor translation issues. With integration, the deployment of the website happens more frequently, and the parts of the website affected by recent changes can revert to English until the translation software is rerun, which may cause the website to occasionally appear untranslated. Work on this issue is ongoing with a view to rapid resolution.

C. Maintain and improve functionality (Goal 3)

36. Over the last year, most of the Secretariat's information technology development has focused on the new website, the integration and migration of the Biosafety Clearing-House, and a number of other urgent priorities. However, the following are some of the improvements that have been made and features that added to the ABS Clearing-House during this reporting period:

(a) *New article common format* – The article common format allows for website content to be updated dynamically without the need to redeploy a new version of the website. This common format is used on the “About the ABS-CH”, “Frequently Asked Questions”, “Step-by-Step Guides” and “Announcements”;

(b) *Improved search engine optimization (SEO)* – Search engine optimization is a way to improve how ABS Clearing-House information is processed by search engines, such as Google, so that it appears appropriately in their search results. In the past, only limited information from the website was optimized for search engines; now, the entire website, including the records, has been optimized. For example, if a user enters in Google a unique identifier for a particular record, the top result should link directly to the correct ABS Clearing-House record. It should be noted that improving visibility in search engines through SEO is a process, and search results improve with time;

(c) *New website speed optimizations* – There has been improvement in way that files (JavaScript and CSS files) and content (such as static text or images) for the website are cached and updated in the browser of a user's computer. These files are now only downloaded from the server when they have been changed or are missing from the browser's memory. The files that are downloaded come from a content delivery network (CDN) service in order to optimize performance by distributing files and content to locations that are best¹¹ for the user, in order to reduce bandwidth cost, and improve load times globally. This optimization has significantly improved speed and performance compared with previous versions of the ABS Clearing-House.

D. Integration with the clearing-house mechanism of the Convention (Goal 4)

37. As indicated above, integration of the CBD clearing-houses, in particular the Biosafety Clearing-House, has been a large focus of the development work done since the fourteenth meeting of the Conference of the Parties. In the last year, the Biosafety Clearing-House and ABS Clearing-House projects have merged into one, and they now share the same backend infrastructure and codebase as well as many components of the front-facing website interface. Although the initial phase of the Biosafety Clearing-House migration slowed the advancement of the ABS Clearing-House, the Secretariat is poised to use information technology resources more efficiently and effectively to deliver better products more quickly, including the ABS Clearing-House.

38. As integration with the Biosafety Clearing-House continues, it offers the possibility of integrating several potentially useful features into the ABS Clearing-House, such as:

(a) *An improved report analyser* – The report analyser mechanism includes a tool that will allow comparison between past national reports;

(b) *Online sharing of draft information* – This feature allows a user to share a link to a read-only version of a draft record. For example, before the publication of an IRCC, it could be used share a draft version of the record with the user;

(c) *Autosave of draft records* – This feature adds the possibility of recovering draft records that have not been saved for a set period of time;

(d) *Display of references* – When a record is displayed, each reference can also be listed in a separate section under the record. For example, if a competent national authority (CNA) record on the

¹¹ Requests for content are typically algorithmically directed to nodes that are optimal in some way. When optimizing for performance, locations that are best for serving content to the user may be chosen. This may be measured by choosing locations that have the fewest hops, the lowest number of network seconds away from the requesting client, or the highest availability in terms of server performance (both current and historical) so as to optimize delivery across local networks.

ABS Clearing-House is opened, a “references” section under the CNA record can display a list of the certificates (IRCCs) for the permits issued by that CNA. Similarly, if the record for a certain checkpoint is opened, each checkpoint communiqué gathered from that checkpoint could also be displayed;

(e) *Improved search* – Making information available in a clear and organized manner through the search is a key requirement of the ABS Clearing-House. Recent integration with the Biosafety Clearing-House has spurred development related to improving the shared search infrastructure and related search interface. The proposed mock-up of the ABS Clearing-House search interface, as well as a demonstrator version of the Biosafety Clearing-House search, will be presented for the consideration of the Informal Advisory Committee.

39. Website style guidelines are currently in development and will be applied to all CBD webpages, including the ABS Clearing-House, in order to provide CBD website users with a consistent, ergonomic and friendlier user experience. For example, changes may include standardizing colours and placement for commonly used buttons, for “cancel”, “close” and “save”. All such changes will be communicated in advance to users through the ABS Clearing-House’s announcements listed on the homepage of the website.

40. In terms of data sharing, two CHM projects, namely the Biobridge Initiative and Bioland, may present opportunities to share useful information on the ABS Clearing-House.

41. The Biobridge Initiative (<https://www.cbd.int/biobridge/>) is an overarching programme focused on catalysing and facilitating technical and scientific cooperation among Parties to the Convention on Biological Diversity and its Protocols.

42. The Secretariat has also been developing a content management tool called Bioland (<https://www.chm-cbd.net/bioland-tool>) that countries can use to rapidly establish a basic operational national CHM website. By integrating Bioland with the ABS Clearing-House’s API, countries could, using the tool, have the option to display their national ABS information automatically on their Bioland website.

III. TECHNICAL AND PRACTICAL ISSUES RELATED TO THE SYSTEM FOR MONITORING THE UTILIZATION OF GENETIC RESOURCES THROUGH THE ACCESS AND BENEFIT-SHARING CLEARING-HOUSE

43. This section presents an overview of the progress made in the implementation of the Protocol’s system to monitor the utilization of genetic resources through the ABS Clearing-House, including an analysis of the IRCCs and checkpoint communiqués available in the ABS Clearing-House.

44. At the third meeting of the Parties to the Protocol, Parties requested the Executive Secretary to continue providing technical assistance for the submission of information on the ABS Clearing-House, including by increasing understanding of the functioning of the system for monitoring the utilization of genetic resources (NP-3/1, para. 21(c)). A global capacity-building workshop on monitoring the utilization of genetic resources under the Nagoya Protocol was organized as indicated earlier. The workshop provided the opportunity to raise awareness, build capacity and share practical experiences regarding the implementation of the provisions of the Protocol related to monitoring the utilization of genetic resources with a view to helping to overcome the practical challenges of implementation as Parties build and improve their national ABS systems.

45. The report on the workshop highlights a number of practical issues that the Committee may wish to consider as a basis for discussions on this topic. The report as well as the presentations from the workshop are available on the CBD meeting web page at: <https://www.cbd.int/meetings/NP-CB-WS-2019-01>.

46. In response to decision NP-3/1, para. 21(c), several outreach activities carried out by the Secretariat since the third meeting of the Parties to the Protocol focused on encouraging the publication, including through the API, of permits or their equivalents and checkpoint communiqués, as well as raising awareness of their role in Protocol’s system to monitor the utilization of genetic resources through the ABS Clearing-House.

47. As of 1 October 2019, a total of 17 Parties¹² have published 1,109 certificates. India, the country that published the first certificate, continues to lead and has published 67 per cent (741) of all the certificates available in the ABS Clearing-House. Approximately, 30 per cent of all certificates are for non-commercial purposes, 30 per cent of the certificates are for commercial purposes and 40 per cent of the certificates have kept their purpose confidential. The subject matter of 75 per cent of all certificates refers to plants (576), microbes (163) and animals (87), and only five certificates have been issued for traditional knowledge associated with genetic resources.

48. In approximately half of the certificates, the identity of the user is not confidential; when they are not confidential, approximately 90 per cent of the certificates have been issued to domestic users and less than 10 per cent of all certificates have been issued exclusively to foreign users. An examination of the location of these users from the information provided reveals that they come from 27 different countries (17 Parties, 10 non-Parties), with most users based in Germany (18), United States (14), United Kingdom (9), Belgium (5), Switzerland (4), Austria (3), Czechia (3), Japan (3) and Spain (3).

49. To date, 15 checkpoint communiqués have been published on the ABS Clearing-House. All the communiqués report on non-commercial utilization of genetic resources by users in five countries.¹³ Most checkpoint communiqués report on utilization of foreign genetic resources within their jurisdiction. However, two countries have issued checkpoint communiqués reporting on the utilization of their own genetic resources by users within their own jurisdictions. To date, only two of the 15 checkpoint communiqués have been linked to certificates.

IV. PRIORITIES FOR FURTHER IMPLEMENTATION

50. The Informal Advisory Committee may wish to provide technical advice on the following elements that may be added to the list of goals and activities for further implementation and administration of the ABS Clearing-House:

- (a) Facilitate the exchange of information with national databases or systems, in particular permitting and monitoring systems;
- (b) Improve, simplify and document the API, in particular by simplifying and reducing the number of endpoints needed to carry out actions, especially those that may be useful for national permitting and monitoring systems;
- (c) Provide an option to automatically display a country's national information on their national Bioland website;
- (d) Develop a developer/application registration system to control and track access to the API;
- (e) Complete the translation mechanism and ensure that the translation of the content of the ABS Clearing-House is complete and maintained in the six official languages of the United Nations;
- (f) Improve the search, search interface and display records.

¹² Countries publishing IRCCs: Belarus (7), Bulgaria (3), Dominican Republic (2), Ethiopia (1), France (172), Guatemala (2), India (741), Kenya (38), Lao People's Democratic Republic (5), Malta (1), Mexico (8), Panama (19), Peru (1).

¹³ Countries publishing CPCs: Denmark (4), Germany (7), Japan (2), Malta (1) and Qatar (1).