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COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Item 5 of the Provisional Agenda

AD HOC TECHNICAL WORKING GROUP ON ACCESS AND BENEFIT-SHARING FOR GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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POSSIBLE MODALITIES FOR ADDRESSING ACCESS AND BENEFIT-SHARING FOR GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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I. INTRODUCTION

1. The Commission, at its Thirteenth Regular Session, mandated the Ad Hoc Technical Working Group on Access and Benefit-sharing for Genetic Resources for Food and Agriculture (Working Group), to:

> *analyze, as appropriate, possible modalities for addressing access and benefit-sharing for genetic resources for food and agriculture, taking into account the full range of options, including those presented in the Nagoya Protocol.*

2. Based on the document, *Distinctive features of genetic resources for food and agriculture*[1] and on experience gained and lessons learned from existing access and benefit-sharing (ABS) arrangements established by some stakeholders in the different subsectors of food and agriculture,[2] this document aims to identify issues for which approaches and modalities for legislative, administrative or policy measures for ABS for genetic resources for food and agriculture (GRFA) exist or could be developed. The Working Group may wish to consider these approaches and modalities in reviewing the options to assist countries in developing legislative, administrative and policy measures for ABS for GRFA.

II. APPROACHES AND MODALITIES FOR ACCESS AND BENEFIT-SHARING FOR GENETIC RESOURCES FOR FOOD AND AGRICULTURE

3. While some of the distinctive features of GRFA (see *Table 1*) might not necessarily require ABS solutions which are different from those chosen for other sectors of genetic resources, this section focuses on features of GRFA which, individually or in the aggregate, could be considered as to call for distinctive solutions. Some of these features are considered below in relation to specific legislative, administrative or policy approaches or modalities.

A. APPROACHES

Standardized vs. case-by-base ABS arrangements

4. While the Convention on Biological Diversity (CBD) and the Nagoya Protocol on Access to Genetic Resources and the Fair Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (Protocol), on the one hand, and the International Treaty on Plant Genetic Resources for Food and Agriculture (Treaty), on the other, explicitly recognize the authority of governments to determine, subject to national legislation, access to genetic resources, and acknowledge that this authority flows from the sovereign rights of States over their natural resources, they stand for two different regulatory approaches.

5. Under the Multilateral System of Access and Benefit-sharing (MLS) of the Treaty, Contracting Parties are required to make certain plant GRFA available and to share benefits derived from those materials according to standardized conditions, as laid down in the Standard Material Transfer Agreement (SMTA). ABS under the Treaty's MLS is thus not a matter for negotiation on a case-by-case basis. Moreover, monetary benefits accrued under SMTAs are not shared bilaterally between the parties concerned. Instead, they are paid into a trust fund (the Benefit-sharing Fund) established for receiving financial resources and utilizing them primarily for the direct or indirect benefit of farmers in all countries, especially in developing countries, and countries with economies in transition, who conserve and sustainably utilize plant GRFA.[3]

[1] CGRFA/WG-ABS-1/12/3.
[2] Background Study Paper No. 59.
[3] Cf. Article 13.3 Treaty.

Table 1: Distinctive features of genetic resources for food and agriculture[4]

A. The role of GRFA for food security	A.1 GRFA are an integral part of agricultural and food production systems and play an essential role for achieving food security and the sustainable development of the food and agriculture sector.
	A.2 Plant, animal, invertebrate and microbial GRFA form an interdependent network of genetic diversity in agricultural ecosystems.
B. The role of human management	B.1 The existence of most GRFA is closely linked to human activity and many of them can be regarded as human-modified forms of biodiversity.
	B.2 The maintenance and evolution of many GRFA depend on continued human intervention, and their sustainable utilization in research, development and production is an important means of ensuring their conservation.
C. International exchange and interdependence	C.1 Historically, GRFA have been widely exchanged across communities, countries and regions over often long periods of time, and a relevant part of the genetic diversity used in food and agriculture today is of exotic origin.
	C.2 Countries are interdependent with regard to their GRFA and act both as providers of some genetic resources and as recipients of other genetic resources.
	C.3 The international exchange of GRFA plays a crucial role in the functioning of the sector, and its importance is likely to increase in light of climate change and technological advance.
D. The nature of the innovation process	D.1 The innovation process for GRFA is usually of incremental nature and based on contributions made by many different people in different places at different points of time.
	D.2 Most products are not developed out of an individual genetic resource, but with the contributions of several genetic resources at different stages in the innovation process.
	D.3 Most products developed with the use of GRFA can in turn be used as genetic resources for further research and development, which makes it difficult to draw a clear line between providers and recipients of GRFA.
	D.4 Many agricultural products reach the market place in a form in which they may be used both as biological resources and as genetic resources.
E. Holders and users of GRFA	E.1 GRFA are held and used by a broad range of very diverse stakeholders.
	E.2 The different stakeholders managing and using GRFA are interdependent and many of them have a dual role acting both as providers and as recipients of genetic resources.
	E.3 A significant amount of GRFA is privately held.
	E.4 An important part of GRFA is held and can be accessed *ex situ*.
F. GRFA exchange practices	F.1 The exchange of GRFA takes place in the context of traditional and customary practices and existing user communities.
	F.2 Research and development in the food and agriculture sector are characterized by an extensive transfer of genetic material between different stakeholders along the value chain.
G. Benefits generated with the use of GRFA	G.1 The expected benefits from the use of an individual sample of germplasm are often uncertain and on average relatively low at the time of transaction.
	G.2 The use of GRFA generates important non-monetary benefits.
	G.3 The use of GRFA leads to external effects going far beyond the individual provider and recipient, and some benefits can only be generated at the collective level.

6. In contrast to the Treaty's MLS, standardized access and benefit-sharing conditions are not contained in the CBD or the Protocol. While Parties, under the CBD, shall "endeavor to create conditions to facilitate access to genetic resources"[5] and Parties of the Protocol shall, *inter alia,* "create conditions to promote and encourage research,"[6] neither of the two instruments creates any (conditional or unconditional) right to access genetic resources. ABS, as envisioned by the CBD and the Protocol, are ultimately a matter for bilateral agreements on a case-to-case basis. However, Decision X/1 of the Conference of the Parties recognizes that the International Regime is constituted

[4] CGRFA/WG-ABS-1/12/3.
[5] CBD, Article 15.2.
[6] Protocol, Article. 8a.

by a number of instruments and complementary instruments, including the Treaty, and the Protocol leaves room for international agreements, including other specialized ABS agreements which, in principle, could foresee standardized ABS arrangements modelled, for example, after the Treaty's MLS.[7] In addition, Parties to the Protocol shall consider the need for and modalities of a global multilateral benefit-sharing mechanism for genetic resources "that occur in transboundary situations or for which it is not possible to grant or obtain prior informed consent.[8] This mechanism could also be linked to standard modalities for ABS.

7. The logic of the Treaty's MLS, which provides facilitated access to plant GRFA on the basis of standardized ABS conditions, is compelling for various reasons. As acknowledged in the Preamble to the Treaty, all countries depend very largely on plant GRFA that originated elsewhere. Moreover, plant GRFA have been widely and over millennia exchanged across communities, countries and regions which makes it often difficult, if not impossible, to attribute them to a specific country of origin. There is, in addition, agreement that plant GRFA are the raw material indispensable for crop genetic improvement and essential in adapting to unpredictable environmental changes and future human needs and, thus, their exchange across national boundaries is of pivotal importance.

8. Considering the distinctive features of GRFA, in particular:

- the high degree of interdependence of countries with regard to their GRFA (Feature C.2, see *Table 1*);
- the high number of exchanges of GRFA between countries (Features C.3; F.2), along with the strong need for access to genetic resources in the sector of food and agriculture (Feature A.1);
- the incremental nature of the innovation process, with genetic material being improved over many successive generations (Feature D.1),

policy makers may wish to explore ABS approaches that aim to facilitate and strengthen the exchange of GRFA and the capacity of agricultural systems to sustain agricultural production and ensure food security.

9. While the Treaty offers an important model for ABS for GRFA, this model may not fit or not be agreeable as one-size-fits-all solution for *all* GRFA. However, in developing ABS policies and legislation for GRFA other than plant GRFA, countries may wish to explore the modalities of the Treaty's MLS, with a view to further investigating and assessing management options, including pooling solutions, standardization of ABS conditions and multilateral approaches, that accommodate the special features of (specific subsectors of) GRFA. Such options could be developed at different levels, ranging from small stakeholder groups to multilateral instruments, distinguish different models of cooperation, categories, uses and users of GRFA as well as benefit-sharing modalities. They could facilitate access to GRFA and determine the form, level, and manner of benefit-sharing in line with commercial practice, thus ensuring continuous access to a wide genetic base and, at the same time, benefit-sharing on mutually agreed standard terms. Benefits could be decoupled from the individual providers and specific GRFA, and be shared on a collective basis, rather than with individual providers of genetic material. Decoupling benefit-sharing from specific GRFA and specific providers could help to simplify monitoring, tracking and enforcement. Lessons learnt from the implementation of existing ABS laws, but also experiences gained with the implementation of the Treaty could be instructive in the consideration and assessment of management options for ABS for GRFA.

Legislative, administrative or policy measures

10. In addressing ABS for GRFA, governments will need to determine the nature of the instrument through which they address the issue of ABS. Interestingly, the Protocol leaves quite some discretion to the Parties as to whether to adopt legislative, administrative or policy measures.[9] With regard to ABS for GRFA, governments may wish to take into account, that some subsectors already have developed or are in the process of developing exchange and benefit-sharing practices which

[7] Protocol, Article 4.2.
[8] Protocol, Article 11.
[9] See Protocol, Articles 5.2; 6.3; and 15.1; 15.2.

could either render ABS rules superfluous or on which ABS rules could piggyback.[10] The Treaty demonstrates that the development of ABS rules along the lines of existing exchange practices may contribute to a high level of acceptance amongst user communities.

B. MODALITIES

11. There is a wide range of modalities from which policy-makers may choose in designing ABS frameworks and in defining the regime of GRFA in those frameworks. This section presents a selection of possible modalities. Depending on the approach countries decide to take with regard to ABS for genetic resources, they may wish to address a whole range of issues, be it through legislative, administrative or policy measures. The Working Group may wish to recommend to the Commission, that future work on ABS for GRFA address these issues in a coherent and consistent way and in harmony with the Treaty, the CBD and the Protocol.[11] Possible modalities are explored in relation to the issues usually addressed in ABS frameworks: objectives of the ABS measures; the scope of the ABS measures; the relationship with other agreements and instruments; the designation of competent authorities; prior informed consent (PIC) and mutually agreed terms (MAT); benefit-sharing; measures to provide that genetic resources utilized have been accessed in accordance with PIC and MAT; designation of checkpoints to monitor and enhance transparency about the utilization of GRFA.

Objectives of ABS measures

12. Considering the essential role of GRFA as an integral part of agricultural and food production systems for achieving food security and the sustainable development of the food and agriculture sector (Feature A.1) policy makers may wish to consider food security as an objective of ABS legislation. In this regard, Article 1 of the Treaty is instructive in that it specifically refers to " sustainable agriculture and food security". Other possible objectives include: the recognition/ protection of Farmers' Rights, as enshrined in Article 9 of the Treaty, the recognition of intellectual property rights, technology transfer and capacity-building.[12] Existing ABS measures refer to various objectives the most obvious of which are the conservation and sustainable use of genetic resources and the fair and equitable sharing of benefits derived from them. Some ABS instruments also reflect the importance of GRFA for food security.[13] One of the objectives of the *Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising Out of Their Utilization*, for example, is "to contribute to poverty alleviation and be supportive to the realization of human food security, health and cultural integrity, especially in developing countries, in particular least developed countries and small island developing States among them."[14] The Protocol, although not listing food security as one of its objectives, requires its Parties to consider the importance of GRFA and their special role for food security in the development and implementation of ABS legislation and regulatory requirements.[15]

13. Whether or not a measure achieves a given objective will usually not depend on whether this objective is explicitly stated, be it in the proposal for the policy measure or in the policy measure itself. Nevertheless, in some jurisdictions, statements of objectives may play an important role in the interpretation of rules and regulations and it may be for this reason that many of the existing ABS laws and policies include sections identifying specific objectives. Food security, as an objective of ABS measures, may therefore be a relevant modality for addressing ABS for GRFA.

Scope of ABS measures in relation to GRFA

14. The *scope* of ABS measures may be divided into:

Types of genetic resources covered (genetic vs. biological resources)

[10] For an economic analysis of standardisation options for ABS, see Täuber, S. et. al. (2011): An economic analysis of new instruments for Access and Benefit-Sharing under the CBD – Standardization options for ABS transaction. Bonn (http://www.bfn.de/fileadmin/MDB/documents/service/skript286.pdf).
[11] See document, CGRFA/WG-ABS-1/12/4.
[12] Background Study Paper No. 42, p. 21.
[13] Background Study Paper No. 42, pp. 21-22.
[14] Bonn Guidelines, section 11 (e).
[15] Protocol, Article 8(c).

As many agricultural products reach the market place in a form in which they may be used both as biological resources and as genetic resources (Feature D.4), ABS frameworks for GRFA need to address the question as to which type of use should trigger ABS requirements. Genetic resources are defined by the CBD as "genetic material of actual or potential value" and genetic material means "any material of plant, animal, microbial or other origin containing functional units of heredity."[16] The Treaty largely mirrors these definitions with regard to plant GRFA. The range of resources covered by existing ABS frameworks differ widely. Some countries seem to extend the coverage of their ABS laws to all biological resources which could be interpreted as to cover even bulk agricultural commodities.[17] However, the use of genetic resources as bulk commodities, e.g. access to a forest for timber extraction, is outside the scope of the Protocol and the scope of most ABS laws.

Genetic resources and GRFA

Most existing ABS frameworks apply to genetic resources as such and do not distinguish between genetic resources and GRFA.[18] The Protocol, while acknowledging the distinctive features of GRFA, does not translate the features into substantive guidance or "solutions". If the Commission decides to develop guidance for ABS for GRFA, the Commission's work in this regard would be relevant to the implementation of the Protocol, which stipulates that due regard should be paid to useful and relevant ongoing work or practices under other international instruments and relevant international organizations, provided they are supportive of and do not run counter to the objectives of the CBD and the Protocol.[19]

Types of activities triggering ABS requirements

Most countries limit the scope of their ABS measures to genetic resources *sensu stricto,* i.e. to research on and development of genetic or biochemical compounds. Under the Protocol, only access to genetic resources *for their utilization* shall be subject to PIC and "utilization of genetic resources" means to conduct research and development on the genetic and/or biochemical composition of genetic resources, including through the application of biotechnology (…)."[20] The Treaty requires that facilitated access within the MLS be provided "solely for the purpose of utilization and conservation for research, breeding and training for food and agriculture, provided that such purpose does not include chemical, pharmaceutical and/ or other non-food/ feed industrial uses. In the case of multiple-use crops (food and non-food), their importance for food security should be the determinant for their inclusion in the Multilateral System and availability for facilitated access."[21] It should be noted that the Protocol also distinguishes between different utilization contexts: conservation and sustainable use of biological diversity; present and imminent emergencies; and the importance of GRFA for food security.[22]

ABS measures may also exclude specific activities from ABS requirements. In line with similar exclusions in patent law, ABS measures could exempt, for example, access to genetic resources for private, non-commercial use. In line with the breeders' exemption available under plant variety protection legislation, ABS measures could also exempt from ABS requirements the use of material as an initial source of variation to create new materials. However, such an exemption, although common in the sphere of plant breeders' rights, would exclude an activity that ABS measures typically target.

[16] CBD, Article 2.
[17] *See* Background Study Paper No. 42, p. 23.
[18] *See* Background Study Paper No. 42, pp. 23-25.
[19] Protocol, Article 4.3.
[20] Protocol, Article 2(c).
[21] Treaty, Article 12.3 (a).
[22] Protocol, Article 8.

Privately and publicly owned GRFA

ABS measures may apply to publicly or privately owned or both GRFA. Given that a significant amount of GRFA is privately held (Feature E.3), ABS laws covering privately held GRFA may have a significant impact on the exchange of GRFA. While the Treaty's MLS includes only plant GRFA "that are under the management and control of the Contracting Parties and in the public domain"[23] as well as materials brought within the purview of the Treaty by other holders, including natural and legal persons,[24] the Protocol leaves the application of PIC to privately owned GRFA at the discretion of Parties.

Temporal scope of the ABS measures

While the Protocol applies to genetic resources (and traditional knowledge) accessed after the entry into force of the Protocol for a Party, it does not prevent Parties from extending their national ABS measures to genetic resources accessed prior to the entry into force of the Protocol. The Treaty's MLS applies to certain plant GRFA, even if accessed prior to its coming into force. The temporal scope of ABS measures is of particular relevance to GRFA as many of these resources have been collected in the past, and an important part of GRFA is held and can be accessed *ex situ* (Feature E.4). The retroactive application of ABS measures could therefore affect the status of such collections.

Geographical scope of the ABS measures

The Protocol only applies to genetic resources in areas over which States exercise sovereign rights. In accordance with the United Nations Convention on the Law of the Sea, genetic resources, including GRFA, in internal and territorial waters, exclusive economic zones and extended continental shelves are therefore covered by the scope of the Protocol. Areas beyond national jurisdictions do not fall under the Protocol. It should be noted, however, that this does not prevent Parties to the Protocol from regulating access to GRFA by their nationals in such areas.

Relationship with other instruments

15. Any future work of the Commission on ABS for GRFA should be coherent with, and mutually supportive of the work under relevant international agreements, in particular the Treaty and the Protocol. In considering future work of the Commission on ABS for GRFA, including the development of model clauses for ABS agreements or of guidelines assisting governments in the development and implementation of ABS measures for GRFA, the Working Group may wish to address the relationship of its work on ABS with the Treaty. Given that the Treaty's scope covers all plant GRFA, the Working Group could recommend that plant GRFA be excluded from any future work of the Commission on ABS. Alternatively, the Working Group could recommend that the Commission, in its future work on ABS coordinate closely with the Governing Body of the Treaty, showcase the MLS as a special agreement for plant GRFA, highlight the advantages of its MLS and refer to relevant information regarding accession to, and implementation of the Treaty.

Competent authorities

16. Competent authorities are designated by governments and are responsible for granting access to genetic resources. Under the Protocol, Parties have to designate one or more competent national authorities which shall be responsible, *inter alia*, for granting access and advising on applicable procedures and requirements for obtaining PIC and entering into MAT. In addition, Parties have to designate national focal points on ABS, which shall be responsible for liaison with the Secretariat and provide relevant information to applicants.[25] While in many countries multiple authorities are involved in the implementation of ABS measures, including the approval of access applications, Background Study Paper No. 42, commissioned by the Secretariat in 2009, noted with surprise that "in none of the

[23] Treaty, Article 11.2.
[24] Treaty, Articles 11; 15.
[25] Protocol, Article 13.

laws [examined] was the direct approving state authority a ministry or agency involved in food and agriculture."[26] Various domestic governance models exist for the implementation of ABS frameworks, such as a central approving authority or a system of delegation from the central authority to other entities, and these models may further be explored as to their advantages and disadvantages for ABS for GRFA.

Prior informed consent and mutually agreed terms

17. PIC and MAT are at the core of ABS measures. PIC is granted by national competent authorities (or other designated entities) to a user prior to, or at the time of accessing genetic resources. MAT is an agreement reached between providers and users of genetic resources on the conditions of access and use of the resources, and the benefits to be shared. PIC, if granted by a competent authority, is usually an official, non-contractual act, whereas MAT form part of a private law contract, even though a public authority may be a party to this contract. Under the Treaty, Contracting Parties in the exercise of their sovereignty, have granted PIC in advance for plant GRFA in the MLS, while MAT have been pre-negotiated in the form of the SMTA.

18. Considering the extensive transfer of genetic material for research and development in the food and agriculture sector (Feature F.2), the interdependence of all countries with regard to GRFA (Feature C.2), and the essential role of international exchanges of GRFA for the functioning of the sector (Feature C.3), PIC and MAT may raise logistic, administrative and financial issues when applied to research and development in the food and agriculture sector. Considering that that the expected monetary benefits are on average relatively low (Feature G.1), the efficient management of ABS for GRFA may become a challenge. Options to overcome this challenge may include: the exclusion of (specific) GRFA from the scope of the ABS measures; the establishment of common pools with standard ABS conditions; the simplification or even standardization of PIC procedures for GRFA; and the elaboration of model MAT for (subsectors of) GRFA.

19. ABS measures may also require the consent of other stakeholders, such as indigenous and local communities, in cases where traditional knowledge associated with genetic resources and held by indigenous and local communities is accessed. In fact, the Protocol requires its Parties to take measures, in accordance with domestic law, with the aim of ensuring that in such cases traditional knowledge is accessed with the PIC, or approval and involvement, of the indigenous and local communities, and that MAT have been established. [27] Considering that GRFA are held and used by a broad range of very diverse stakeholders (Feature E.1), including indigenous and local communities, these stakeholders should be involved in the development of ABS measures for GRFA. In addition, ABS measures for GRFA may require the PIC and MAT of relevant stakeholders, including indigenous and local communities whose traditional knowledge associated with GRFA is accessed.

Benefit-sharing

20. The fair and equitable sharing of benefits arising from the utilization of genetic resources is a key component of ABS measures. Benefits may include monetary and non-monetary benefits. The Treaty recognizes that facilitated access to plant GRFA included in the MLS is itself a major benefit of the MLS. With regard to monetary benefits, it may be relevant that the innovation process for GRFA is usually of incremental nature and based on contributions made by many different people in different places at different points of time (Feature D.1), and that most products are not developed out of an individual genetic resource, but with the contributions of several genetic resources at different stages in the innovation process (Feature D.2). Hence, it may be undesirable, if not impracticable, to direct payments to an individual provider. Benefits could, for example, be decoupled from individual providers or accessions, and be distributed in line with agreed policies and disbursement criteria.

21. Considering the important non-monetary benefits of GRFA (Feature G.2), such as the sharing of research results, capacity-building and information, ABS measures for GRFA could identify non-monetary benefits which are of particular relevance to the food and agriculture sector. The Protocol lists research directed towards food security, taking into account domestic uses of genetic resources in

[26] Background Study Paper No. 42, p. 47.
[27] Protocol, Article 7.

the country providing genetic resources, as well as food and livelihood security benefits as possible non-monetary benefits.[28]

Compliance measures and monitoring

22. User country measures, *i.e.* measures of a country that ensure that users of genetic resources within the jurisdiction of that country have accessed the resources in accordance with PIC and that MAT have been established, have been described as the 'core of the core' of the Protocol.[29] The Protocol requires each Party to take appropriate, effective and proportionate legislative, administrative or policy measures to provide that genetic resources utilized within its jurisdiction have been accessed in accordance with PIC and that MAT have been established, as required by the domestic ABS legislation or regulatory requirements of the other Party. Parties to the Protocol shall also take measures to address non-compliance with user country measures and cooperate in cases of alleged violations. [30] To support compliance, Parties to the Protocol shall also take measures, as appropriate, to monitor and to enhance transparency about the utilization of genetic resources which shall include the designation of one or more checkpoints.[31]

23. User country measures, as required by the Protocol, as well as the monitoring requirement which all Parties to the Protocol have to implement, may pose significant challenges to the food and agriculture sector. Considering the sheer number of transboundary transfers of GRFA (Feature F.2), users of GRFA might at least initially struggle with the requirement that all their material acquired after the entry into force of the Protocol is of good legal status. Countries may wish to consider measures that do not discourage the use of GRFA, given that the sustainable utilization of GRFA in research, development and production is an important means of ensuring their conservation (Feature B.2). Arrangements that facilitate compliance and simplify monitoring could be further explored.

III. GUIDANCE SOUGHT

24. The Working Group may wish to consider approaches and modalities for addressing ABS for GRFA, including those contained in this document, in exploring options for the Commission to assist countries in developing legislative, administrative and policy measures for ABS for GRFA.

[28] Protocol, Annex, sections 2(m); 2(o).
[29] Nijar, G. (2011): The Nagoya Protocol on Access and Benefit-sharing of Genetic Resources: An Analysis. Kuala Lumpur, p. 18.
[30] Protocol, Article 15.
[31] Protocol, Article 17.