



CONVENTION ON BIOLOGICAL DIVERSITY

1 EXPERT GROUP ON TECHNOLOGY TRANSFER
2 AND SCIENTIFIC AND TECHNICAL
3 COOPERATION
4 First meeting
5 Montreal, 27 November 2005
6 Items 3 and 4 of the agenda

7 TECHNOLOGY TRANSFER AND SCIENTIFIC AND TECHNICAL COOPERATION

8 DEVELOPMENT OF GUIDANCE ON FRAMEWORKS TO FACILITATE ACCESS TO AND
9 ADAPTATION OF TECHNOLOGIES, AND ON POSSIBILITIES AND MECHANISMS OF
10 COOPERATION WITH PROCESSES IN OTHER CONVENTIONS AND INTERNATIONAL
11 ORGANIZATIONS

12 *Note by the Executive Secretary*

13 FIRST INFORMAL DRAFT FOR REVIEW BY THE EXPERT GROUP – DO NOT QUOTE

14 *Introduction*

15 1. Article 16 of the Convention on Biological Diversity recognizes that both access to and transfer of
16 technology among Contracting Parties are essential elements for the attainment of the objectives of the
17 Convention, and requires that each Contracting Party undertakes to provide and/or facilitate access for
18 and transfer to other Contracting Parties of technologies that are relevant to the conservation and
19 sustainable use of biological diversity or make use of genetic resources and do not cause significant harm
20 to the environment.

21 2. In order to develop meaningful and effective action to enhance the implementation of Articles 16 to
22 19 as well as related provisions of the Convention, the Conference of the Parties, by decision VII/29,
23 adopted a programme of work on technology transfer and technological and scientific cooperation.
24 Element 3 of the programme of work provides for the creation of enabling environments in order to foster
25 technology transfer and technological and scientific cooperation.

26 3. By paragraph 7 of its decision VII/29, the Conference of the Parties (COP) requested the Executive
27 Secretary to establish an expert group on technology transfer and scientific and technical cooperation,
28 which shall assist, through electronic consultations and long-distance communications as well as through
29 meetings in conjunction with the informal advisory committee of the clearing-house mechanism, in (a)
30 the preparation of proposals on options to apply institutional, administrative, legislative and policy

1 frameworks that facilitate access to and adaptation of technologies in the public domain and to
2 proprietary technology, as well as in (b) the exploration of possibilities and mechanisms of cooperation
3 with processes in other Conventions and international organizations, such as the UNFCCC Expert Group
4 on Technology Transfer.

5 4. The present note reports on the progress made in achieving this task. Section 2 provides a more
6 extensive overview of part (a) of the mandate provided to the expert group on technology transfer and
7 scientific and technological cooperation, and presents guidance that was prepared thereon in response to
8 this element of the mandate. Section 3 explores possibilities and mechanisms of cooperation with
9 processes in other Conventions and international organizations as requested in part (b) of the mandate of
10 the expert group.

11 **2. *Development of guidance on measures and mechanisms that foster an enabling environment***
12 ***for cooperation as well as the transfer, adaptation and diffusion of relevant technologies***

13 5. Activity 3.1.2 of the programme of work calls upon the Executive Secretary, based on input from
14 Parties and relevant international organizations, to compile and synthesize information, including case
15 studies, and prepare guidance on institutional, administrative, legislative and policy frameworks that
16 facilitate access to and adaptation of technologies in the public domain and to proprietary technologies,
17 especially by developing countries and countries with economies in transition, and in particular, on
18 measures and mechanisms that:

19 (a) Foster an enabling environment in developing and developed countries for cooperation
20 as well as the transfer, adaptation and diffusion of relevant technologies in accordance
21 with the needs and priorities identified by countries;

22 (b) Present obstacles that impede transfers of relevant technologies from developed
23 countries;

24 (c) Provide, in accordance with existing international obligations, incentives to private-
25 sector actors as well as public research institutions in developed country Parties, to
26 encourage cooperation and transfer of technologies to developing countries, through,
27 e.g., technology transfer programmes or joint ventures;

28 (d) Promote and advance priority access for Parties to the results and benefits arising from
29 technologies based upon genetic resources provided by those Parties, in accordance with
30 Article 19, paragraph 2 of the Convention, and to promote the effective participation in
31 related technological research by those Parties;

32 (e) Promote innovative approaches and means of technology transfer and cooperation such
33 as Type 2 partnerships, in accordance with the outcome of the World Summit on
34 Sustainable Development, or transfer among actors, involving in particular the private
35 sector and civil society organizations.

36 6. According to the preamble of element three of the programme of work, creating enabling
37 environments refers to activities of Governments at national and international levels that aim to create an
38 institutional, administrative, legislative and policy environment conducive to private and public sector
39 technology transfer and to the adaptation of transferred technology and that aim to remove technical,
40 legislative and administrative barriers to technology transfer and technology adaptation, inconsistent with
41 international law. It is also recognized that enabling environments are necessary in both developed and
42 developing countries. Pertinent activities can be distinguished according to whether they focus on
43 fostering the *provision* of technologies or on the *reception, adaptation and diffusion* of technologies.
44 While many countries may be mainly providing or mainly receiving technologies, it has to be borne in
45 mind that individual countries may sometimes simultaneously provide and receive technologies from
46 abroad.

7. Against this background, the following options could be taken into consideration by Parties in their efforts to further develop national institutional, administrative, legislative and policy frameworks that foster an enabling environment for technology transfer. The identification of these options is based on an accompanying information document, which provides the compilation and synthesis of pertinent information as requested in programme activity 3.1.2 (document UNEP/CBD/EGTTSTC/1/INF/1).

A. Strengthen the legal, administrative, regulatory and policy framework for conservation and sustainable use of biodiversity

i. Improve, both on the receiving and the providing end of technology transfer, the **effectiveness of national strategies, plans and policies for conservation and sustainable use of biodiversity**, including through their improved enforcement.

ii. Promote, in accordance with international law, the application of **standards for environmental performance** and create awareness about products, processes and services that use biodiversity-sound technologies through means such as voluntary eco-labelling, product standards and codes.

Rationale: Stronger and well-enforced strategies, plans and policies, by increasing the cost of non-compliance, can be effective instruments in promoting demand for environmentally sound technologies at the receiving end, including technologies for conservation and sustainable use of biodiversity. At the providing end, a strong, focused and well-enforced regulatory and policy framework for environmental protection in general, and for the conservation and sustainable use of biodiversity in particular, will promote the development and improvement of technologies that help to implement the policy targets set out in the framework in a more effective and/or cost-efficient manner.

Supporting activities:

S1. International organization and initiatives could be invited to increase the technical support provided in the effective implementation of the Convention, through for instance National Biodiversity Strategy and Action Plans.

S2. International cooperation and funding, in partnership with financial institutions, will be key for the effective implementation of programmes for enhancement of access to capital markets by prospective technology users.

B. Review other institutional, administrative, legislative and policy frameworks that are relevant for technology transfer under the Convention

iii. Review, both on the providing and the receiving end of technology transfer and in accordance with international law, **trade policies** with a view to ensure that they support the transfer of technology of relevance to the Convention.

Rationale: On the receiving end, removing tariff and non-barriers to trade can contribute to promote the effective transfer of technology by fostering the import of technology-intensive goods and the related package of pertinent technological information and know-how in form of manuals, training, long term cooperation between importers and exporters, etc. On the providing end, more open trade policies can contribute to increase the demand for imported biodiversity-related goods, which will subsequently increase the demand for technologies for sustainable use of the underlying biodiversity assets in exporting countries.

iv. Review the institutional, administrative, legislative and policy frameworks that form the **domestic investment regime**, with a view to ensure that administrative processes will not impose

1 *prohibitive transaction costs on investors through tedious procedures relating to, for instance,*
2 *licensing, tariff setting, and foreign exchange controls.*

3 v. *Design and implement **procedures for technology-related risk assessments** that are effective in*
4 *ensuring that transferred technologies are economically viable, socially acceptable and*
5 *environmentally friendly, and that are predictable, speedy, and do not put onerous*
6 *administrative burden on prospective technology users and providers.*

7 *Rationale:* Foreign direct investment (FDI) is the dominant mechanism for technology transfer to
8 developing countries. Technology disseminated through FDI generally includes the entire package
9 including experts and their skills, and also contributes to technology transfer through on-the-job training
10 and various forms of interaction among local and foreign firms. As it usually implies the long term
11 involvement of the investor, backward and forward linkages favour technological diffusion, as
12 technologically advanced foreign affiliates help their local suppliers and host country firms involved in
13 the production process to adopt new technologies.

14 vi. *Review the regime governing **land tenure** with a view to ensure that it supports the transfer of*
15 *technology of relevance to the Convention.*

16 *Rationale:* The regime governing land tenure has an important impact on biodiversity-related technology
17 choices and associated transfer. Technology choices by land users will *inter alia* depend on who owns,
18 controls and manages the resources both legally and in practice. Insecurity created by unclear property
19 rights or conflicting claims deters investment, including investments into technology for the conservation
20 and sustainable use of biodiversity.

21 vii. *Establish or strengthen programmes that enhance **access to capital markets**, in particular for*
22 *small and medium enterprises, for instance through the establishment of small-scale loan*
23 *facilities that provide **seed capital**, the **bundling of projects**, or the **provision of collateral** and/or*
24 ***performance guarantees**.*

25 *Rationale:* The acquisition of new technologies for sustainable use and conservation of biodiversity is
26 constrained by limited access to capital. The high upfront costs and long pay-back periods that are
27 sometimes associated with conservation and sustainable use technologies may also represent
28 impediments in an environment where access to funding is restricted.

29 viii. *Review, both on the receiving and the providing end, institutional, administrative, legal and*
30 *policy frameworks with a view to ensure that they support and encourage the utilization of*
31 ***intellectual-property-rights-related mechanisms for the sharing of benefits**, such as joint*
32 *patents with stakeholders in countries of origin of genetic resources or joint research*
33 *programmes with institutions in such countries.*

34 *Rationale:* Such mechanisms may provide important avenues for the transfer in particular of
35 biotechnologies.

36 ix. *Study domestic corporate actors in developing countries and identify their **strategies to cope***
37 ***with problems/challenges associated with intellectual property regimes**, with a view to assess*
38 *their adaptive capacity, to gauge the need for political intervention, and identify possible entry*
39 *points for political responses.*

40 *Rationale:* Relevant actors in OECD countries seem to often find pragmatic solutions to the problems
41 that are sometimes associated with intellectual property regimes, such as for instance patent thickets,
42 reach-tough claims or overly broad patents. However, it appears to be less clear whether and to what

1 extent this finding also applies to the relevant actors in the developing world, which typically operate
2 under more severe constraints in terms of legal expertise and capacity.

3 x. *Consider policy recommendations emanating from the **technical studies** that further explore and
4 analyse **the role of intellectual property rights in technology transfer** in the context of the
5 Convention on Biological Diversity, as foreseen in activity 3.1.1 of the programme of work.*

6 *Rationale:* The studies are to identify options to increase synergy and overcome barriers to technology
7 transfer and cooperation of relevance to the Convention.

8 xi. *Undertake national studies to analyze whether and to what extent **export controls** present
9 obstacles that impede the transfer of technologies of relevance to the CBD.*

10 *Rationale:* Export controls are legal and administrative systems designed to limit or to prohibit transfer
11 of certain types of technology, and specifically equipment, materials and knowledge that have potential
12 weapons uses. A concern has been raised that the current international system of export controls could be
13 an obstacle to the transfer of technologies of relevance to the Convention. However, because of
14 information constraints, it is very difficult to gauge whether and to what extent export controls present
15 obstacles that impede the transfer of technologies of relevance to the Convention.

16 *Supporting activities:*

17 S3. The Executive Secretary could be requested to continue to follow and analyse the WTO
18 negotiations on paragraph 31 (iii) of the Doha Declaration, on the reduction or, as appropriate,
19 elimination of tariff and non-tariff barriers to environmental goods and services, and to analyze their
20 relevance for technology transfer under the CBD.

21 *Rationale:* As such goods may also include technology-intensive goods of relevance to the Convention,
22 these negotiations have the potential to remove or alleviate an obstacle to the effective implementation of
23 Article 16 of the Convention. Furthermore, the elimination of tariff and non-tariff barriers by developed
24 countries for certain biodiversity-based goods from developing countries could foster the demand for
25 these goods and, subsequently, the demand in those developing countries for technology for the
26 sustainable use of the underlying biodiversity assets.

27 S4. Relevant international organizations could be invited to undertake global studies to analyze
28 whether and to what extent export controls present obstacles that impede the transfer of technologies of
29 relevance to the CBD.

30 **C. *Design and implement, or strengthen as appropriate, institutional, administrative, legislative
31 and policy frameworks that foster access to, and transfer of, technologies of relevance under the
32 Convention, in particular by strengthening domestic research and innovation systems in developing
33 countries***

34 xii. *Consider the establishment or strengthening of **national technology transfer offices**, or the
35 designation of appropriate existing institutions to fulfill this role, in particular for the transfer of
36 technology of relevance to the Convention. Such a national institution could, in close
37 cooperation with National Focal Points for the Convention and its clearing house mechanism,
38 act as a central consulting point on technology access and transfer for other national or
39 international actors to turn to.*

40 *Rationale:* This institution could act as a central gateway for the exchange of pertinent technology-
41 related information, that is, on needs and opportunities for the transfer and adaptation of technology, on
42 risk assessments as well as on related capacity needs and the support available, through for instance

1 national and international training programmes and initiatives, in building or enhancing capacities. The
2 envisaged institution could also assist in the negotiation of technology transfer agreements or technology
3 transfer provisions/clauses in other agreements, and/or negotiate, as appropriate under the circumstances
4 of the individual countries, on behalf of relevant actors. It could support the harmonization of transfer
5 agreements among public organizations in order to reduce the transaction costs of transferring
6 intellectual property.

7 *xiii. Support the establishment of **research consortia** among research institutions in developing*
8 *countries, including through for instance the establishment and work of **patent pools** or*
9 ***intellectual property commercialization agents***

10 *Rationale:* Individual public research organizations in many developing countries are at a comparative
11 disadvantage in accessing biotechnology products due to substantial economies of size in biotechnology
12 research, small market size, and their weak bargaining position. However, public research institutions
13 within the same region will often have similar goals, needs and assets, which is an incentive to pool
14 resources. As a consortium they might be in a better position to gain access to technologies if they
15 negotiate as a group and also could share the costs. For instance, such a consortium could enhance the
16 sharing of biotechnology tools and germplasm products among public research institutions. In particular,
17 patent pools may help companies to more easily obtain the licenses required to practice a particular
18 technology, which reduces transaction costs and facilitates the rapid deployment of new applications.
19 Commercialization agents provide a mechanism to turn intellectual property into competitive and cost-
20 effective products.

21 *xiv. Foster **cooperation between research institutions** of developed and developing countries*
22 *through for instance the establishment and financing of **twining arrangements**.*

23 *Rationale:* On the providing end, a strong national research and innovation system will drive the process
24 of technology development – a necessary precondition for any transfer. On the receiving end, research
25 institutions that are located within the importing country will often be closer to local stakeholders and
26 technology users and their wealth of indispensable information for successful dissemination and
27 adaptation of technology.

28 *xv. Promote the interaction between institutions of education and training as well as of research and*
29 *development on the one side and the **private sector** on the other side, through **alliances, joint***
30 ***ventures or public-private partnerships**, and by establishing, or making use of existing*
31 ***intermediary institutions and networks**.*

32 *Rationale:* Partnerships are being seen increasingly as an effective means to leverage public funds,
33 thereby overcoming budget restrictions, while also harnessing the efficiency of the private sector and
34 allowing it to operate more effectively through changes in public policy that create more business
35 opportunities. While these partnerships should eventually develop and operate independently, public
36 sector support is often necessary to establish the basic framework for collaboration. Joint ventures and
37 co-operations between governments and firms may prove useful not only in channeling concrete private
38 investments into technology but may also contribute to alter other firms' risk perceptions in the medium
39 and in the long run, thus contributing to an increasing and more stable private sector involvement. Public-
40 private partnerships may also play an important role in the development of innovative funding
41 mechanisms for technology transfer, such as through the promotion of institutions, arrangements and
42 mechanisms that can provide innovative financing, including micro-financing, green finance, secured
43 loans, and/or leasing arrangements. Intermediary institutions are often said to play a useful role in acting
44 as a "honest broker", which focuses on creating public-private-partnerships by facilitating fact-based
45 negotiations of transfer agreements, providing "managed" technology transfer, and providing access to
46 financing facilities.

1 xvi. *Support the set-up of long-term technological **cooperation between private firms in developed***
2 ***and developing countries**, including the co-financing of local businesses with little or no access*
3 *to long-term investment capital, through for instance the establishment and strengthening of so-*
4 *called **matchmaking programmes**.*

5 *Rationale:* Matchmaking programmes seek to facilitate information sharing and personal contacts
6 between private sector technology producers and potential users of these technologies, for instance in the
7 form of advisory services and support in identifying partners, study visits and examinations as well as the
8 provision of information on technology transfer and the need to adapt and apply new technology to
9 developing countries.

10 xvii. *Consider, on the providing end, the use of measures and mechanisms that **provide incentives to***
11 ***the private sector** to enhance the transfer of pertinent technology, in accordance with*
12 *international law. For instance:*

13 (a) *The use or adaptation of existing provisions in domestic tax systems on tax breaks or*
14 *deferrals for charitable activities to provide adequate incentives for private companies to engage in the*
15 *transfer of relevant technologies and related capacity-building activities;*

16 (b) *Existing guidelines for eligibility to research-oriented tax breaks or deferrals could be*
17 *adapted to generate incentives for private sector actors that engage in research making use of genetic*
18 *resources, to implement adequate mechanisms for the promotion and advancement of priority access to*
19 *the results and benefits arising from the biotechnologies that result from such research, in accordance*
20 *with Article 19(2) of the Convention. Such measures could in particular encourage: the provision of*
21 *broad access to research tools (through free or preferential access or non-exclusive licenses), joint*
22 *patents with providers of genetic resources in countries of origin of genetic resources, or joint research*
23 *programmes with institutions in such countries. The measures could also discourage reach-through*
24 *provisions;*

25 (c) *The application of subsidized export credits or loan guarantees that act as insurance against*
26 *risks in international transactions with a view to provide incentives to private sector actors to engage in*
27 *technology transfer for the purpose of the Convention on Biological Diversity.*

28 xviii. *Consider, on the receiving end, the use of **incentives to encourage foreign actors** to provide*
29 *access to and transfer of technology to domestic public or private institutions.*

30 *Rationale:* The provision of incentive measures is an important element of an enabling environment in
31 particular for the transfer of proprietary technologies. For such technologies, governments have by
32 definition only limited, if any, force in directly regulating or prescribing their transfer.

33 xix. *Review, on the providing end, the **principles and guidelines that govern the funding of public***
34 ***research institutions** and develop them further with a view to fully reflect the pertinent*
35 *provisions and guidance of the Convention on technology transfer. In particular, the guidelines*
36 *could foresee the implementation of adequate mechanisms for the promotion and advancement of*
37 *priority access to the results and benefits arising from the biotechnologies that result from such*
38 *research, in accordance with Article 19(2) of the Convention, and could also encourage the*
39 *broad access to research tools (through free or preferential access or non-exclusive licenses),*
40 *joint patents with stakeholders in countries of origin of genetic resources, joint research*
41 *programmes with institutions in such countries, and discourage reach-through provisions.*

42 *Rationale:* Public research institutions are almost by definition mainly or exclusively funded by public
43 monies. It therefore appears that public authorities have more leverage on the terms of reference that
44 govern research undertaken by public institutions, when compared with the research undertaken by

1 private sector actors. In many countries however this comparatively high degree of leverage will
2 nevertheless be restricted by a number of important factors, including: (i) the high value assigned to the
3 policy principle that governments should not interfere with research and science (freedom of research
4 and science); and (ii) the fact that budgetary restrictions have led many governments to put public
5 research institutions under increasing pressure to look for private co-funding and for commercialization
6 of their research results. In such cases, the approach outlined in the previous paragraph could be usefully
7 complemented by the types on incentive measures provided to private sector actors, as described in
8 paragraph xvii above.

9 *Supporting activities:*

10 S5. Relevant international organization could be invited to continue their activities for strengthening
11 the research and innovation systems of developing countries, including through the training of staff at all
12 levels as well as the enhancement of technical and institutional capacity.

13 S6. Assisted by the Secretariat, Governments that host relevant meetings of the Convention could
14 organize international technology fairs and/or workshops, taking place back-to-back to the meetings, that
15 would bring together technology providers and users.

16 *Rationale:* Personal contacts are often key for the successful identification of transfer opportunities and
17 the successful conclusion of the transfer. Technology fairs or workshops are therefore important means
18 to facilitate matchmaking.

19 S7. Parties may wish to engage in a collaborative effort to establish an international initiative with a
20 view to support the implementation of Article 16 to 19 and the programme of work on technology
21 transfer and scientific and technological cooperation, and in particular to facilitate the development and
22 diffusion of relevant technologies through partnerships among OECD countries, developing countries,
23 multilateral organizations and the private sector.

24 *Rationale:* The example of the Climate Technology Initiative (CTI), which was launched in 1995 by 23
25 OECD/IEA member countries and the European Commission to support the technology-related
26 objectives of the UNFCCC, shows the useful role of such an international network for the effective
27 implementation of provisions on technology transfer.

28 S8. The Executive Secretary could be requested to compile and analyse, in cooperation with relevant
29 organizations and initiatives and with assistance by the expert group on technology transfer, existing
30 technology transfer agreements or technology transfer provisions/clauses in other agreements such as for
31 instance contractual agreements relating to access to genetic resources and associated traditional
32 knowledge and the fair and equitable sharing of benefits arising out of their utilization. This compilation
33 and analysis could also include existing templates for stands technology transfer
34 agreements/provisions/clauses, and could be used to develop international guidance that could act as
35 reference for good/best practice on the application of technology transfer agreements/provisions/clauses.

36 *Rationale:* The compilation and guidance could contribute to enhance the capacity of developing
37 countries in the negotiation of technology transfer agreements/provisions/clauses, including in the
38 context of contractual agreements relating to access to genetic resources and associated traditional
39 knowledge and the fair and equitable sharing of benefits arising out of their utilization.

- 1 (e) Development of joint work programmes or plans; 5/
 2 (f) Joint workshops (at the international level); 6/
 3 (g) Joint capacity-building activities, including training, and local, national and regional
 4 workshops to promote synergy in implementation; 7/
 5 (h) Case-studies on interlinkages; 8/
 6 (i) Facilitation of exchange of information and experience, 9/ including improving
 7 inter-accessibility of available web-based data; 10/
 8 (j) Cooperation in communication, education and public awareness programmes; 11/
 9 (k) Cooperation in the development of advice, methodologies and tools. 12/
- 10 12. The paper already identified a number of possibilities for further collaboration on technology
 11 development and transfer:
- 12 (a) Analysis of the experience gained with the UNFCCC's technology information
 13 clearing-house (TT:Clear) and the clearing-house mechanism (CHM) of the Convention on Biological
 14 Diversity, and identifying opportunities for learning from each others experience;
- 15 (b) Exchange of information on activities and of expertise as appropriate between the
 16 UNFCCC's EGTT and the expert group on technology transfer and technical and scientific cooperation
 17 of the Convention on Biological Diversity, which have similar mandates; 13/
- 18 (c) Cooperation in the identification of technology of joint interest and relevance;
- 19 (d) Sharing experience gained from, *inter alia*, the work undertaken under the UNCCD's CST
 20 on traditional knowledge, early warning systems and benchmarks and indicators.

21 *B. Synergy and cooperation on technology transfer*

22 13. The convention bodies have frequently emphasized the importance of synergy at the national and
 23 local levels. For example, according to the SBSTTA to the Convention on Biological Diversity, "the
 24 primary motivation for cooperation is to promote synergies at the national and local levels, where
 25 conventions are implemented. Efforts to promote synergies should be designed in accordance with
 26 national circumstances and priorities with a view to achieving sustainable development". 14/ Similarly,
 27 the SBSTA to the UNFCCC reiterated the "importance of promoting synergy at the national and local
 28 levels where implementation of the various conventions occurs, recognizing that this can lead to
 29 increased efficiency and can help avoid duplication". 15/ The UNCCD COP, at its fifth session,

4/ CBD decisions VI/20 and VII/2; UNFCCC decision 13/CP.8 and SBSTA 14 conclusions (FCCC/SBSTA/2001/2, para. 42 (d)); UNCCD decision 12/COP.6, paragraph 3.

5/ UNCCD Article 8.1; A joint work programme between CBD and UNCCD has been developed, see paragraph 12 of this note; UNFCCC SBSTA 14 conclusions (FCCC/SBSTA/2001/2, para. 42 (d) (ii)).

6/ UNFCCC SBSTA 14 conclusions (FCCC/SBSTA/2001/2, para. 42 (d) (ii)).

7/ CBD decision VII/2, paragraph 5 (c).

8/ CBD decision VII/15, paragraph 10.

9/ UNCCD decision 17/COP.3, paragraph 9.

10/ UNFCCC SBSTA 20 conclusions (FCCC/SBSTA/2004/6, para. 130); CBD decision VII/23, paragraph 7 (e).

11/ CBD decision VII/24, paragraph 4 (b).

12/ CBD decision VII/15, paragraph 15.

13/ As per CBD decision VII/29, paragraph 7 (b).

14/ CBD SBSTTA recommendation IX/11.

15/ SBSTA 19 conclusion (FCCC/SBSTA/2003/15, para. 44 (d)).

1 underlined the need for action at the national and local levels, noting that concerted action makes a
2 significant difference at those levels. 16/

3 14. Substantial synergy could be realized at the national level by identifying, providing access to, and
4 transferring technologies that are of joint interest and relevance to several conventions. For instance,
5 there seems to be a substantial overlap between technologies of relevance under CBD and technology for
6 adaptation for climate change. It is expected that in the future, the GEF will fund climate change
7 adaptation projects, and these may also contribute to the objectives of the CBD. At a recent UNFCCC
8 Seminar on the development and transfer of environmentally sound technology for adaptation to climate
9 change, most technologies that were presented in the case studies on enhancing the adaptability of natural
10 ecosystems (including agricultural ecosystems) to climate change seemed also to be useful for
11 conservation and sustainable use of biodiversity. Moreover, some technologies that make use of genetic
12 resources also seem to play a valuable role as technologies for adaptation to climate change, such as the
13 development and transfer of drought-resistant crop varieties, an example that was mentioned by a number
14 of speakers at the seminar.

15 15. All conventions share the overarching objective of achieving sustainable development. From this
16 perspective, synergies may be realized in particular if focus is given not on the transfer of technology for
17 narrow purposes, but rather on the transfer of entire “technology packages” to achieve the sustainable use
18 of biological resources, including for instance specific biotechnological applications for the development
19 of biotechnological products based on genetic resources.

20 16. There will however be limitations to synergy, which will need to be addressed through well-
21 established and smoothly working channels of cooperation. For instance, in the case of technologies for
22 adaptation to climate change, it also appears that a number of these technologies have neutral or even
23 negative impacts on biodiversity, mirroring, on the technology level, a similar conclusion of the AHTEG
24 on biodiversity and climate change. In the case of negative impacts, cooperation between the relevant
25 national authorities may seem to be all the more important to minimize the tradeoffs involved in the
26 transfer and application of such technology. And in the case of technologies that make use of genetic
27 resources being transferred as technologies for adaptation to climate change, there seems to be a need for
28 close cooperation in order to ensure that such transfers meet the provisions of the CBD with regard to
29 technologies that make use of genetic resources, in particular Article 16 (3) and 19.

30 17. Another important area for realizing synergy on technology transfer, at national and international
31 levels, is the development and application of advice, methodologies and tools, as many methodological
32 issues arising in technology transfer, despite different mandates of the individual conventions, may be
33 similar. On the international level, the exchange of pertinent information will be an important means to
34 realize such synergy. For instance, a substantial amount of work undertaken by other conventions and
35 multilateral processes as well as relevant international organizations has been analysed in the preparation
36 of the draft guidance on measures and mechanisms that foster an enabling environment for cooperation
37 as well as the transfer, adaptation and diffusion of relevant technologies, presented in the previous
38 section of this note. 17

39 18. At the national level, enabling environments for technology transfer should be designed with a view
40 to avoid overlapping responsibilities – to the extent possible, they should serve the technological needs
41 under different conventions. For instance, a central technology transfer office, as suggested in the draft
42 guidance, could be responsible, in close cooperation with relevant focal points and implementing
43 agencies, for pertinent work under different conventions.

16/ UNCCD document ICCD/COP(5)/6.

17/ See document UNEP/CBD/COP/8/INF/xxx.

19. There are again limitations to realizing synergy on the development and application of such advice, methodologies and tools, which are due to specific provisions on technology transfer that may be unique to each convention. For instance, the provisions of, *inter alia*, Article 16 (3) and 19 are unique to the CBD. However, cooperation both at national and international levels would again remain important. For instance, close cooperation and consultation at the national level could ensure that technology transfers for the purposes of other conventions are undertaken in a manner that is consistent with these provisions.

20. The work on intellectual property rights in the context of technology transfer under the CBD provides another example for useful cooperation and exchange of information, in particular at the international level. While this work is being undertaken to contribute to implement pertinent provisions of Article 16 that are again specific to the CBD, the results of this work, for instance in terms of the identification of lessons learnt and/or best practices in implementing these provisions, may also be of interest and relevance for other conventions.

C. Opportunities and mechanisms of cooperation under the elements of the programme of work

21. A number of opportunities for collaborative work can be identified along the different elements of the programme of work on technology transfer and scientific and technological cooperation, on: (i) technology assessments, (ii) information systems; (iii) enabling environments; (iv) capacity building.

(i) Technology assessments

National level

22. Cooperation among relevant national focal points and other relevant national authorities with a view to ensure that technology transfers for the purposes of other conventions are undertaken in a manner that is consistent with Article 19 of the Conventions and activity 1.2.1 of the programme of work, on Preparation, as appropriate, of transparent impact assessments and risk analyses of the potential benefits, risks and associated costs with the introduction of technologies, including new technologies whose risks and benefits are not yet determined.

23. In the context of promoting complementarity among the national biodiversity strategies and action plans (NBSAPs) under the Convention on Biological Diversity, the national action programmes (NAPs) of the UNCCD, and the national adaptation programmes of action (NAPAs) for least developed countries of the UNFCCC, ^{18/} cooperation among relevant national focal points and other relevant national authorities with a view to ensure that technology needs assessments that are conducted under NAPs and NAPAs fully reflect the technology needs of relevance to the Convention.

International level

24. Technology risk assessments could be considered by the joint liaison group of the three Rio conventions as a cross-sectoral area of cooperation.

25. Cooperation with UNDP-GEF in the review of the UNDP handbook for conducting technology needs assessments (TNA), with a view to ensure the handbook is fully operational for realizing synergy in technology needs assessments for the purposes of different conventions, and in conducting needs assessments of technology of relevance to the CBD.

^{18/} See paragraph xx (a) above.

1 (ii) *Information systems*

2 *National level*

3 26. Cooperation among relevant national focal points and other relevant national authorities with a view
4 to implement activity 2.4.1 of the programme of work (initiate and conduct consultations among relevant
5 organizations, indigenous and local communities and all relevant stakeholders with a view to identifying
6 options to further regional and international cooperation in the development or improvement of
7 information systems on technology transfer and technology cooperation).

8 27. Cooperation among relevant national focal points and other relevant national authorities with a view
9 to ensure that activities 2.2.2, 2.3.1 and 2.4.3 of the programme of work, on developing or strengthening
10 national information systems of technology transfer and technology cooperation identifying, and on
11 implementing measures to develop or strengthen appropriate information systems of technology transfer
12 and technology cooperation, including at the local level, is implemented in synergy with the objectives of
13 other conventions.

14 28. Further opportunities for cooperation under this programme element, at national and international
15 levels, are identified in the documentation on activities 2.1.2 and 2.1.3, on the development of proposals
16 to enhance the clearing-house mechanism, and on the development of advice and guidance on the use of
17 new information exchange formats, protocols and standards to enable interoperability among relevant
18 existing systems of national and international information exchange.

19 (iii) *Enabling environments*

20 *National level*

21 29. Cooperation among relevant national focal points and other relevant national authorities with a view
22 to ensure that activities to implement proposals on measures and mechanisms that foster an enabling
23 environment for cooperation as well as the transfer, adaptation and diffusion of relevant technologies, are
24 undertaken in a manner that is consistent and maximizes synergy with provisions on technology transfer
25 of other processes and conventions. For instance, the establishment of a national technology transfer
26 office could be undertaken in close consultation with the national focal points of other conventions and
27 other relevant national authorities in order to avoid duplication of efforts through overlapping mandates.

28 30. Cooperation among relevant national focal points and other relevant national authorities with a view
29 to ensure that technology transfers under other processes and conventions are consistent with the
30 provisions of the CBD.

31 31. Cooperation among relevant national focal points, including national focal points for the Global
32 Environment Facility (GEF), and other relevant national authorities with a view to ensure that concrete
33 technology transfers contribute to sustainable development, are undertaken in a manner that maximizes
34 synergy whenever technologies have the potential to serve the objectives of different multilateral
35 conventions and processes, and otherwise minimizes negative impacts to the extent feasible.

36 *International level*

37 32. Cooperation with relevant multilateral processes and conventions, as well as with other international
38 organizations, in the implementation of supporting activities identified in the proposals on measures and
39 mechanisms that foster an enabling environment for cooperation as well as the transfer, adaptation and
40 diffusion of relevant technologies, presented in the previous section. Other relevant organizations may
41 for instance include the World Trade Organization (on relevant trade agreements), UNCTAD and WIPO

1 (on the role of intellectual property rights), as well as relevant international networks that act as
2 intermediaries and facilitate technology transfer, such as ISAAA or CGIAR.

3 33. Continue to exchange information on activities and of expertise as appropriate between the CBD
4 expert group on technology transfer and scientific and technical cooperation and other relevant expert
5 bodies, such as the expert group on technology transfer of the UNFCCC.

6 (iv) *Capacity building*

7 *National level*

8 34. Cooperation among relevant national focal points, including national focal points for the Global
9 Environment Facility (GEF), and other relevant national authorities with a view to ensure that capacity
10 building activities related to technology transfer are undertaken in a manner that maximizes synergy
11 among different multilateral conventions and processes.

12 *International level*

13 35. Cooperation and consultation among funding institutions including the Global Environment Facility
14 (GEF), as well as the Bali Strategic Plan for Technology Support and Capacity building of the United
15 Nations Environment Programme (UNEP), with a view to ensure that capacity building activities on
16 technology transfer are designed and implemented in way that avoids the duplication of efforts and
17 maximizes synergy between different multilateral conventions and processes.