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Funding adaptation in developing countries: extending the share of proceeds used to assist in meeting the costs of adaptation; and options related to assigned amount units of Parties included in Annex I to the Convention

Technical paper

Summary

This technical paper analyses options for funding adaptation in developing countries, by extending the share of proceeds or generating revenue from assigned amount units. In conducting this analysis, the paper explores the scale of the funding that could be raised for adaptation under each option, possible impacts of the options on the carbon market and, where appropriate, issues involved in the monetization of Kyoto units provided to the Adaptation Fund.

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I. Introduction

A. Mandate

1. The Subsidiary Body for Implementation (SBI), at its twenty-eighth session, continued the preparations for the second review of the Kyoto Protocol pursuant to its Article 9, which is to take place at the fourth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP). In this context, the SBI requested the secretariat to prepare a technical paper on:

(a) Extending the share of proceeds to assist in meeting the costs of adaptation to joint implementation and emissions trading;

(b) Options related to assigned amount units (AAUs) of Parties included in Annex I to the Convention (Annex I Parties), for funding of adaptation in developing countries.[1]

2. The SBI further stated that the paper should explore: the implications of the above-mentioned measures and the potential impacts on the carbon market, including on supply and demand, in particular for countries with economies in transition; the potential scale of the resources generated; the options for operationalization; and transfer to the Adaptation Fund. In preparing the paper, the secretariat should take into account, inter alia, decision 4/CMP.3, paragraph 6 (a), and the submissions from Parties mentioned in paragraph 3 below. It further requested the secretariat to make the paper available to Parties prior to the pre-sessional workshop referred to in decision 4/CMP.3, paragraph 11.[2]

3. The SBI noted that further information would facilitate the consideration of this issue and, to this end, invited Parties to submit to the secretariat their views on this matter by 19 September 2008.[3] These submissions are contained in document FCCC/KP/CMP/2008/MISC.1.

B. Scope of the note

4. This note presents an analysis of options for extending the share of proceeds and options related to AAUs of Annex I Parties. Chapter II provides an overview of available options while chapters III and IV explore the two sets of options in further detail, including in relation to their potential scale and market impacts. These chapters do not identify market impacts from the current share of proceeds under the clean development mechanism (CDM) or compare these with the impacts of the options now under consideration. The final chapter explores a number of issues relating to the 'monetization' of Kyoto units by the Adaptation Fund.

C. Possible action by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol

5. The CMP may wish to consider the analysis of options contained in this technical paper as it determines what further action should be taken, in the context of the second review of the Kyoto Protocol or as part of other relevant processes, to develop options for raising funds to assist in meeting the cost of adaptation in developing countries.

II. Overview of options

6. In accordance with Article 12, paragraph 8, of the Kyoto Protocol and decision 17/CP.7, paragraph 15 (a), a 'share of proceeds' equal to 2 per cent of the certified emission reductions (CERs)

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[1] FCCC/SBI/2008/8, paragraph 110.
[2] The pre-sessional workshop is planned for 22–23 October 2008 in Athens, Greece.
[3] FCCC/SBI/2008/8, paragraph 109.

issued for a CDM project is to be used to assist Parties not included in Annex I to the Convention (non-Annex I Parties) that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.[4] These CERs are forwarded to the Adaptation Fund established by decision 10/CP.7 to finance adaptation projects and programmes in non-Annex I Parties. The CERs that make up the share of proceeds must be monetized before the funds become available.

7. Several Parties have proposed that the share of proceeds for adaptation applied in the context of the CDM be extended to the other mechanisms under the Kyoto Protocol, namely joint implementation (JI) and emissions trading. Some Parties have proposed that the assigned amounts of Annex I Parties be used as a basis for raising funding for adaptation in developing countries, in particular by using revenues from auctioning these assigned amounts (or allowances issued under domestic trading schemes).[5]

8. This paper analyses two main options for extending the share of proceeds and two main options related to the assigned amounts of Annex I Parties. These options are outlined in table 1. While there are possible variants of each of these main options, the options analysed in this paper have been formulated in order to be broadly equivalent to the share of proceeds for adaptation already established for the CDM. Some variants are briefly discussed in chapters III and IV.

Table 1. Overview of main options for raising funds to assist with adaptation in developing countries

Option	Brief description	Potential scale[a]
Extending the share of proceeds		
1. Extending the share of proceeds on the basis of unit transfers	A share of proceeds would be applied to the first international transfers of AAUs, RMUs and ERUs from the national registries which issued them	2008–2012: USD 25–130 million per year 2030: USD 30 million to USD 2.25 billion
2. Extending the share of proceeds on the basis of unit issuance	A share of proceeds would be applied to the issuance of AAUs and RMUs	2008–2012: USD 5.5–8.5 billion per year (AAUs only)[b] 2013–2020: USD 3.5–7.0 billion per year (AAUs only)[b]
Assigned amount units		
3. Contributions from domestic auctioning revenues	A percentage of the revenues from auctioning allowances to entities under domestic trading schemes would be contributed towards international adaptation activities	2013–2020: USD 1–2 billion per year
4. Contributions from international auctioning revenues	A percentage of Annex I Party AAUs would be transferred to a central body, which would conduct auctions of the units and contribute the funds towards international adaptation activities	2013–2020: USD 3.5 to 7.0 billion per year (AAUs only)[b]

Abbreviations: AAUs = assigned amount units, ERUs = emission reduction units, RMUs = removal units.
[a] Based on funding levied at 2 per cent of the relevant basis for the option.
[b] No estimate is provided for the share of proceeds on the issuance of RMUs, as estimates of issuance are not available.

[4] The following are exempt from the share of proceeds for adaptation: CDM projects hosted in least developed countries (in accordance with decision 2/CMP.3), and small-scale afforestation and reforestation CDM projects (in accordance with decisions 14/CP.10 and 6/CMP.1).
[5] Further proposals on options for funding adaptation in developing countries have been presented at sessions of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention. See documents FCCC/AWGLCA/2008/11, FCCC/AWGLCA/2008/MISC.1 and Add.1–3; FCCC/AWGLCA/2008/MISC.2 and Add.1; and FCCC/AWGLCA/2008/MISC.3 and Add.1.

9. A share of proceeds for adaptation under JI or emissions trading could be applied as a percentage of the relevant Kyoto units, as with the current share of proceeds for adaptation in the context of the CDM. This would require the subsequent monetization of the units; this process is currently being considered by the Adaptation Fund Board (see para. 46 below). Alternatively, the extended share of proceeds for adaptation could be applied as a monetary levy on each relevant Kyoto unit (a fixed levy or one that varies with the unit price). This would be equivalent to the share of proceeds to cover administrative expenses of the CDM.[6] For simplicity, this paper assumes that any share of proceeds for adaptation applied under JI or emissions trading is defined as a percentage of Kyoto units.

10. The options for using the assigned amount of Annex I Parties as a basis for raising adaptation funding present similar issues, in that they may result in the Adaptation Fund either receiving Kyoto units that require subsequent monetization by the Fund or directly receiving funds that have already been 'monetized' by the Party sending them.

11. In order to compare the likely effectiveness of the different options, the numerical calculations in this paper assume that each option would be applied as 2 per cent of the relevant basis for that option. While other rates would be equally possible, this approach allows a comparison with the current share of proceeds applied under the CDM. Similarly, it has been necessary in several cases to make assumptions regarding emission commitments after the first commitment period of the Kyoto Protocol. In these cases, the numerical calculations are made on the basis of a reduction in greenhouse gas emissions by Annex I Parties as a group of between 25 and 40 per cent below 1990 emission levels by 2020. This assumption should not prejudice negotiations on this issue.

III. Extending the share of proceeds used to assist in meeting the costs of adaptation

A. Extending the share of proceeds on the basis of unit transfers

1. Description and potential scale of funding

12. An extension of the share of proceeds for adaptation to JI and emissions trading could be implemented by levying a share of proceeds on the first time that an AAU, removal unit (RMU) or emission reduction unit (ERU) is transferred from the issuing Party to another Party. This option restricts the share of proceeds to the first international transfers of these units as a means of defining an equivalent of the share of proceeds for adaptation in the CDM context, in which the share of proceeds is levied only once for each unit (at the time of its issuance, not on subsequent transfers).[7]

13. This extension of the share of proceeds could be monitored and enforced by the international transaction log (ITL), as is currently the case for the CDM share of proceeds. The ITL would check each proposal by a registry to transfer units to another national registry. If the transfer is the first international transfer of the units, the ITL would ensure that units making up the share of proceeds are transferred to the specified account of the Adaptation Fund before the remaining units are transferred to the recipient.

14. Table 2 presents estimates of potential levels of annual funding that could be generated by levying a 2 per cent share of proceeds on the first international transfers of AAUs, RMUs and ERUs

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[6] In accordance with decision 7/CMP.1, the share of proceeds to cover administrative expenses of the CDM is levied as: (1) USD 0.10 per CER issued for the first 15,000 t carbon dioxide equivalent (CO_2 eq) for which issuance is requested in a given calendar year; and (2) USD 0.20 per CER issued for any amount in excess of 15,000 t CO_2 eq for which issuance is requested in a given calendar year.

[7] Other options could be considered which move away from the basis on which the share of proceeds for adaptation is applied within the CDM. For example, the share of proceeds could also be applied on subsequent international transfers of the same unit or on domestic transfers within a Party.

during the first commitment period under the Kyoto Protocol and in the year 2030. This information is based on projections for the carbon market presented in the secretariat's work on investment and financial flows.[8] During the first commitment period, the extension could be expected to generate USD 25–130 million for the Adaptation Fund per year. This would equate to between 30 and 45 per cent of the estimated USD 80–300 million generated per year by the share of proceeds under the CDM.

Table 2. Potential annual funding from extending the share of proceeds on the basis of unit transfers

Period	First international transfers of AAUs, ERUs and RMUs[a]	Issuance of CERs[b]
First commitment period (2008–2012)		
Units transferred internationally or issued (million per year)	90–200	300–450
Price range (USD/unit)[c]	13.50–33.75	13.50–33.75
Annual value (million USD)[c, d]	1 200–6 500	4 000–15 000
Share of proceeds at 2% (million USD per year)	25–130	80–300
2030: low estimate of market size		
Annual value (million USD)	Not available	5 000–25 000
Share of proceeds (million USD per year)	30–225[e]	100–500
2030: high estimate of market size		
Annual value (million USD)	Not available	50 000–250 000
Share of proceeds (million USD per year)	300–2 250[e]	1 000–5 000

Source: Based on table 55 and annex IV, table 1, of the UNFCCC publication *Investment and Financial Flows to Address Climate Change.*
Abbreviations: AAUs = assigned amount units, CERs = certified emission reductions, ERUs = emission reduction units, RMUs = removal units.
[a] Based on a 2 per cent share of proceeds applied to the first international transfers of AAUs, RMUs and ERUs.
[b] Estimates of funding raised through the share of proceeds under the clean development mechanism, are included for purposes of comparison.
[c] Euro values converted to United States dollars and rounded.
[d] Note that the combinations of the lowest price and lowest volume and of the highest price and highest volume are considered unlikely and are excluded from the range.
[e] Estimated at 30–45 per cent of the share of proceeds for CERs based on the ratio for the first commitment period.

15. The investment and financial flows report provides low and high estimates of the market for CERs in 2030 and the corresponding share of proceeds for adaptation in the CDM context. These estimates are shown in table 2. The report does not attempt to derive equivalent estimates for JI and emissions trading beyond 2012, and such estimates would depend on the participating Parties adopting emission reduction commitments, on the type and stringency of such commitments, and on the mitigation cost curves of those Parties. However, on the assumption that JI and emissions trading would continue after 2012 with an annual worth of 30–45 per cent of the revenue generated by CDM projects annually, one could expect an extension of the share of proceeds to generate between USD 30 million and USD 2.25 billion per year.

[8] *Investment and Financial Flows to Address Climate Change.* <http://unfccc.int/files/cooperation-and-support/financial-mechanism/application/pdf/background-paper.pdf>.

2. Impact on the market

16. The application of a small share of proceeds to the first international transfers of AAUs, RMUs and ERUs may act as a small deterrent to international market activities and could slightly reduce the liquidity of the international carbon market. It may have a greater impact on JI than on emissions trading if JI were to be subject to the same share of proceeds as the CDM. A small share of proceeds would not, however, affect the liquidity of any national market.

17. However, as it is unlikely that applying a small share of proceeds to the first international transfers of AAUs, RMUs and ERUs would affect the national emission commitments or domestic mitigation policies of Annex I Parties, the overall demand for these units would not be expected to change. Buyers in Annex I Parties, including private-sector entities, could choose to use other units for compliance, such as allowances established under domestic emissions trading schemes. The quantity of those units is likely to be much larger than the volume of internationally traded AAUs, RMUs and ERUs. Thus, applying a small share of proceeds to the first international transfer of AAUs, RMUs and ERUs is likely to have a negligible impact on the market price.

18. If the share of proceeds has a negligible effect on the market price of compliance units, the share of proceeds would be borne primarily by the sellers. The net revenue they receive for units sold internationally would be lower by almost the full amount of the share of proceeds. This may result in potential sellers deciding to carry over surplus units to future commitment periods. This would reduce the supply of units available to the market to some extent but is unlikely to have more than a negligible impact on the market price.

19. It is not known what the net effect of this option would be on the liquidity of the international carbon market, but it is likely to be small. The share of proceeds may marginally reduce the quantity of units traded internationally, but the sale of the units that are collected as the share of proceeds from the international transfers that do occur would increase the quantity sold on the international market.

20. This option may cause a shift in transactions from ‘spot’ trades where the units are transferred immediately to options and forward contracts that define the future delivery of units at an agreed price. Most options and forward contracts do not lead to an actual transfer of units. As a result, it is likely that the share of proceeds would be collected only on the net export of units from each national registry.

3. Extending the share of proceeds to either joint implementation or emissions trading but not both

21. An extension of the share of proceeds could be made to only JI or emissions trading (not to both). This would result in less funding being raised than if both JI and emissions trading were included, unless the share of proceeds were applied at a commensurately higher rate than 2 per cent. As the estimates presented in table 2 are based on model results that do not distinguish the mechanism used for trades among Annex I Parties, it is not possible to estimate what the difference in funding might be. Similar issues would arise if the share of proceeds were removed from the CDM but applied to one or both of the other mechanisms.

22. Applying the share of proceeds to some mechanisms and not others is likely to always result in some shifts in market activity from the levied mechanisms to the non-levied mechanisms. This would tend to further reduce the revenue generated from the share of proceeds. However, the magnitude of this effect would depend on a number of factors. For example, the effect might be small if the share of proceeds were applied to emissions trading and not to JI, for two reasons. First, JI projects have higher transaction costs, which would counterbalance any savings achieved by avoiding the share of proceeds. Second, many mitigation actions that generate surplus AAUs for trading would not lend themselves well

as JI projects.[9] The effect would probably be larger if the share of proceeds were applied to JI and not trading, as this would widen existing differences in transaction costs between the two mechanisms.

B. Extending the share of proceeds on the basis of unit issuance

1. Description and potential scale of funding

23. An extension of the share of proceeds for adaptation to JI and emissions trading could be implemented by levying a share of proceeds on the issuance of AAUs and RMUs. This option would cover emissions trading and JI, since ERUs are issued by converting existing AAUs and RMUs. Applying a share of proceeds to the issuance of ERUs as well would amount to double taxing, because the share of proceeds would already have been levied on the AAUs or RMUs when they were issued.

24. This option would be implemented in a similar manner to that used to levy the share of proceeds for adaptation in the CDM context, which is also applied on the issuance of CERs. However, whereas it can be expected that all CERs issued will eventually be transferred internationally, it is not expected that all issued AAUs and RMUs will be traded. Levying a share of proceeds on issuance therefore involves a considerably larger number of units than a share of proceeds applied only to the first international transfers of these units.

25. As with a share of proceeds applied to first international transfers, the ITL could monitor and enforce this option. Since the ITL checks each proposal by a registry to issue AAUs and RMUs, it could ensure that units making up the share of proceeds are issued and transferred to the specified account of the Adaptation Fund before the remaining units may be issued.[10]

26. Table 3 presents estimates of potential levels of annual funding that could be generated by applying a 2 per cent share of proceeds to the issuance of AAUs. A 2 per cent share of proceeds on the issuance of AAUs for the first commitment period would generate USD 5.5–8.5 billion per year in this period. For illustrative purposes, a reduction in emissions by Annex I Parties as a group of between 25 and 40 per cent below 1990 emission levels by 2020 has been assumed for the period 2012–2020. On this basis, the share of proceeds would be in the order of USD 3.5–7.0 billion per year. As it is not known how many RMUs will be issued during either of these periods, estimates of the share of proceeds on the issuance of RMUs has not been included.

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[9] In particular, within the European Union (EU), restrictions apply to JI projects in installations covered by the EU emissions trading scheme (EU-ETS), and special provisions apply to prevent the double counting of emissions reductions between JI and the EU-ETS.

[10] Alternatively, the appropriate quantities of AAUs and RMUs could be issued directly into the accounts of the Adaptation Fund, with the Party only issuing the remaining quantities of AAUs and RMUs within its national registry. This diverges from current guidance from the CMP on the functions of national registries and the CDM registry, but would be technically possible. This implementation of the share of proceeds would make this option similar to the Norwegian proposal for auctioning a share of each Party's assigned amount (see para. 40).

Table 3. Potential annual funding from extending the share of proceeds on the basis of unit issuance[a]

Period	
First commitment period (2008–2012)	
Total assigned amount (million AAUs per year)[b]	16 000
2% of total assigned amount (million AAUs per year)	320
Price range (USD/unit)	13.50–33.75
Share of proceeds (million USD per year)[c]	5 500–8 500
Period from 2013–2020	
Assumed total assigned amount (million AAUs per year)[b, d]	10 000–13 000
2% of total assigned amount (million AAUs per year)	200–260
Price range (USD/unit)	13.50–33.75
Share of proceeds (million USD per year)[c]	3 500–7 000

Abbreviation: AAUs = assigned amount units.

[a] Based on a 2 per cent share of proceeds applied to the issuance of AAUs. Although the potential funding raised by this option is given in annual terms in order to make it comparable with the other options, AAUs would be issued at the beginning of a commitment period removal units ((RMUs) would be issued during the commitment period or at the end of the commitment period).

[b] No estimate is provided for the share of proceeds on the issuance of RMUs, as estimates of issuance are not available.

[c] Note that the combinations of the lowest price and lowest volume and of the highest price and highest volume are considered unlikely and are excluded from the range.

[d] Based on a reduction in emissions by Annex I Parties as a group of 25–40 per cent below 1990 emission levels by 2020.

27. As discussed for the Norwegian proposal in chapter IV below, this option would lead to an increase in the cost of mitigation that is higher in percentage terms than the 2 per cent of the share of proceeds. Furthermore, if the application of a share of proceeds to the issuance of AAUs and RMUs is expected before commitments for Annex I Parties are negotiated, there may be a tendency to establish commitments that are less stringent than they would otherwise be.

2. Impact on the market

28. Applying a share of proceeds on the issuance of AAUs and RMUs could have a greater impact on the market than applying it on the basis of first international transfers. A share of proceeds equal to 2 per cent of issuance could amount to 200–260 million AAUs and RMUs per year by 2030. The (limited) data available on expected annual trading volumes after 2012 indicate that 400–600 million units could be traded under a low-demand estimate and that this could be 10 times higher under a high-demand estimate.[11] With the lower estimate of demand, the share of proceeds would represent a substantial increase in the annual supply of units in the market when these units are monetized. However, as the share of proceeds would also take away AAUs from Parties, there would also be an increase in demand for AAUs by at least some of those Parties.

29. If the increases in supply and demand were roughly equal, there may be little or no impact on market prices. However, just over 30 per cent of the total assigned amount represents commitments by Annex I Parties with economies in transition. A share of proceeds on AAU issuance may not increase the demand from these Parties for AAUs on the international market, particularly if they have carried over surplus units from the first commitment period. In this case it is possible that the increase in supply could exceed the increase in demand by 70–75 million units per year. Under the low-demand estimate,

[11] *Investment and Financial Flows to Address Climate Change*. As footnote 8 above.

this could increase the supply by about 15 per cent and lead to lower market prices. Under the high-demand estimate, it could increase the supply by less than 2 per cent and have a negligible price impact.

3. Extending the share of proceeds to either joint implementation or emissions trading but not both

30. In this option, the share of proceeds would be extended only to JI by applying the levy only to the issuance of ERUs. In this case, the revenue generated would be small relative to that generated by the share of proceeds under the CDM. The emission reductions achieved by such projects during 2008–2012 are projected to be 10–20 per cent of the reductions achieved by CDM projects over the same period. It could be expected that applying a share of proceeds only to the issuance of ERUs would induce a shift from JI projects to alternatives such as green investment schemes, emissions trading or CDM projects. The result would be a lower volume of ERUs issued.

31. Using a levy on the issuance of AAUs and RMUs to extend the share of proceeds to emissions trading would automatically cover activities under JI, given that the ERUs issued for JI projects are converted from AAUs and RMUs, on which the share of proceeds would already have been collected. Since this option for the share of proceeds provides a broad basis for the levy, it would not be possible to exclude JI from it (only CDM activities could be excluded).

IV. Options related to assigned amount units of Annex I Parties

A. Contributions from domestic auctioning revenues

1. Description and potential scale of funding

32. A number of Parties are considering the use of revenues from auctioning assigned amount to fund measures, including adaptation, to address climate change in other countries. For example, Germany has indicated that it will use 20 per cent of the revenue raised by auctioning allowances for its domestic emissions trading scheme during 2008–2012 for international climate change purposes.[12] The international component has a budget of EUR 120 million (USD 160 million) in 2008, with a smaller allocation in subsequent years. Half of this amount would be used to fund sustainable energy supply projects in emerging, developing and transition economies. The other half would be used to support adaptation and measures to conserve biodiversity, mainly through bilateral projects.

33. The revisions proposed by the European Commission for the European Union (EU) emissions trading scheme under its phase III (2013–2020) include the auctioning of an increasing share of the allowances under the scheme.[13] These allowances would be auctioned by the member States. The proposal is that each member State should use 20 per cent of the revenues from auctioning for specified "green" uses, including support for mitigation and adaptation measures in other countries. The value of the auctioned allowances could be EUR 40–60 billion (USD 50–80 billion) annually.[14] This would generate EUR 8–12 billion (USD 10–16 billion) per year for green purposes.

34. Using auctioning revenues for international mitigation and/or adaptation actions in this way could be agreed as a mandatory requirement for all Annex I Parties implementing domestic emissions trading schemes. The allowances would be auctioned by each Annex I Party, with the agreed share of revenues being transferred to a specified international fund.

[12] <http://www.bmu.de/files/pdfs/allgemein/application/pdf/klimaschutzinitiative_flyer_en.pdf>.

[13] Under the proposal by the European Commission, from 1 January 2013 all of the allowances for the electricity sector and 20 per cent of the allowances for other industries would be auctioned. The proportion of allowances for other industries auctioned would increase by 20 per cent per year, reaching 100 per cent in 2020.

[14] *ClimatSphere*. **13**, 3rd quarter, 2008. Paris: Caisse des Dépôts. p.2.

35. Most Annex I Parties have implemented, or plan to implement, domestic emissions trading schemes. However, there are currently several exceptions. Furthermore, the proportion of emissions covered by domestic emissions trading schemes varies widely, from less than 20 per cent in some EU member States to approximately 90 per cent in New Zealand, and the proportion of allowances to be auctioned also varies widely, from zero in Canada to 100 per cent in EU member States by 2020. If the contributions to adaptation funding are to be collected evenly among Annex I Parties, this option would require agreement on the proportions of national emissions to be covered by domestic emissions trading schemes and the proportion of allowances to be auctioned.

36. The level of revenue that could be generated by this option would depend on many variables, and it is only possible to roughly estimate the potential funds that may be contributed by this option. For example, assuming that Annex I Party emissions are reduced by 25–40 per cent as a group below their 1990 levels by 2020, that most Parties implement domestic emissions trading schemes covering half of national emissions, that 75 per cent of domestic allowances are auctioned, and that allowance prices range between USD 13.50 and USD 33.75, then it could be expected that domestic auctioning revenues contributed to the Adaptation Fund could total USD 1–2 billion per year.

37. The funds generated in this manner for adaptation could be expected to fall with emission levels in Annex I Parties. This would need to be weighed against the potential for rising allowance prices, more countries implementing domestic emissions trading schemes and greater proportions of national emissions to be covered by them. It is not possible to assess what the net effect for the collection of revenues for adaptation purposes might be.

2. Impact on the market

38. Channelling a proportion of the revenue raised from auctioning allowances under domestic emissions trading schemes would not change the supply or demand for such allowances. It is therefore not expected that there would be an impact on market prices or traded quantities.

39. If this option included an agreement on the share of national emissions to be covered by the domestic emissions trading scheme and the share of allowances to be auctioned, it could increase the quantity of allowances auctioned. However, while the quantity of allowances under auction would change, the total demand and total supply would not. As a result, market prices should not be affected, but market liquidity may increase owing to the greater volume of units auctioned.

B. Contributions from international auctioning revenues

1. Description and potential scale of funding

40. Norway has proposed that a percentage of the AAUs of each Party with an emissions reduction commitment be auctioned to raise revenue for adaptation.[15] A Party would issue into its national registry its approved number of AAUs, less those constituting the share of proceeds. The units corresponding to the share of proceeds would be issued directly to the Adaptation Fund.[16]

41. Table 4 illustrates potential levels of annual funding that could be generated from international auctions of 2 per cent of assigned amounts. A reduction in emissions by Annex I Parties as a group of between 25 and 40 per cent below 1990 emission levels by 2020 has been assumed for the period 2012–2020. On this basis, the revenues raised would be in the order of USD 3.5–7.0 billion per year.

[15] This proposal could be similar to an extension of the share of proceeds for adaptation on the basis of the issuance of AAUs and RMUs, in particular that the units could be issued directly to accounts of the relevant fund. However, the Norwegian proposal does not include RMUs.

[16] Modalities for splitting the issuance of AAUs between the Annex I Party and the registry holding the accounts of the Adaptation Fund would be required.

As it is not known how many RMUs will be issued during this period, an estimate of revenues that could be raised on the issuance of RMUs has not been included.

Table 4. Potential annual contributions from international auctioning revenues[a]

Period from 2013 to 2020	Auctioning of AAUs
Assumed total assigned amount (million AAUs per year)[b]	10 000–13 000
2% of total assigned amount (million AAUs per year)	200–260
Price range (USD/unit)	13.50–33.75
Share of proceeds (million USD per year)[c]	3 500–7 000

Abbreviation: AAUs = assigned amount units.

[a] Based on a 2 per cent share of proceeds applied to the auctioning of AAUs. AAUs would be available to the Adaptation Fund at the beginning of the commitment period but they may be auctioned in portions over the course of the commitment period. The potential funding raised by this option is given in annual terms in order to make it comparable with the other options.

[b] Based on a reduction in emissions by Annex I Parties as a group of 25–40 per cent below 1990 emission levels by 2020.

[c] Note that the combinations of the lowest price and lowest volume and of the highest price and highest volume are considered unlikely and are excluded from the range.

42. The cost of compliance for Annex I Parties would increase by a substantially larger percentage than the 2 per cent share of AAUs auctioned, as the reduction from ‘business as usual’ emissions needed to meet a national commitment is a key driver of the compliance cost. For example, where the required reduction in emissions is equivalent to 20 per cent of a Party’s assigned amount, removing 2 per cent of the assigned amount from the Party represents an increase of almost 10 per cent in the emission reduction that the Party needs to achieve.

43. If Parties expect that a percentage of their assigned amount will be channelled to the Adaptation Fund, it may have the effect that Parties will seek less stringent emission commitments for the post-2012 period. This may result in less mitigation being achieved in parallel to the growth in adaptation funding.

2. Impact on the market

44. A centralized, international auctioning of a proportion of AAUs could have an impact on the market. As is shown in table 4, a share of proceeds equal to 2 per cent of issuance could amount to 200–260 million AAUs per year, compared with 400–600 million units traded under a low-demand estimate and possibly 10 times more than this under a high-demand estimate. With the lower estimate of demand, the share of proceeds would represent a substantial increase in the annual supply. However, as the share of proceeds would also take away AAUs from Parties, there would also be an increase in demand for AAUs by at least some of those Parties.

45. If the increases in supply and demand were roughly equal, there may be little or no impact on market prices. However, just over 30 per cent of the total assigned amount represents commitments by Annex I Parties with economies in transition. A share of proceeds on AAU issuance may not increase the demand from these Parties for AAUs on the international market, particularly if they have carried over surplus units from the first commitment period. In this case it is possible that the increase in supply could exceed the increase in demand by 70–75 million units per year. Under the low-demand estimate, this could increase the supply by about 15 per cent and lead to lower market prices. Under the high-demand estimate, it could increase the supply by less than 2 per cent and have a negligible price impact.

V. Monetization

46. The options discussed in this paper that result in Kyoto units being contributed towards adaptation funding require the units to be sold – 'monetized' – before the revenues may be used. The Adaptation Fund Board, which already faces this issue in the context of the share of proceeds for adaptation under the CDM, is currently considering an approach to monetization by which CERs are sold on carbon exchanges promptly after receipt by the Fund.[17]

47. Where the Adaptation Fund is the recipient of additional Kyoto units under the options considered in this paper, and where the total additional quantity is not too substantial, it is likely that the Adaptation Fund could simply monetize the additional units using the same approach it adopts for the CDM. For example, in the case of an extension of the share of proceeds on the basis of unit transfers, the AAUs, RMUs and ERUs received may add only 30–45 per cent more Kyoto units to the Fund.

48. Under options where a more substantial number of Kyoto units is received, a different approach to monetization may be needed. For example, if the share of proceeds were extended on the basis of unit issuance or if units were received by the Adaptation Fund for auctioning at the international level, the Fund would receive large quantities of AAUs and RMUs within a short period of time as AAUs were transferred to the Fund at the beginning of the commitment period, when the issuance for the full period occurs. Relatively few units would be received in the remainder of the commitment period. It is likely that, in order to not disrupt the market, the AAUs and RMUs collected would need to be stored and sold at regular intervals, for example every six or 12 months.

49. For large quantities of units, auctioning may provide benefits over selling the units on an exchange, as it could be managed through the regular auctioning of large quantities of units, would be more transparent and may reach a broader base of buyers. An auction schedule with the approximate quantities to be sold at each auction could be announced at the beginning of the commitment period to allow the market to anticipate and adjust more easily to the inflow of units on to the market. It should be noted that 2 per cent of all the AAUs and RMUs issued for all Annex I Parties would be a larger quantity of units than that sold at any auction conducted to date in the carbon market.[18]

50. Monetization of Kyoto units would not be required in cases where financial resources are transferred directly to the Adaptation Fund. An example would be the transfer of revenues from the domestic auctioning of the appropriate percentage of assigned amount. Similarly, if the extension of the share of proceeds were to be applied as a monetary levy, financial resources would be transferred directly to the Adaptation Fund. The amount of the levy could be fixed or be linked to an index.

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[17] See *Monetization of Certified Emission Reductions for the Adaptation Fund*, available at <http://www.adaptation-fund.org/images/AFBB2-9-Monetization.pdf>. Those guidelines would be based on a three-tier approach that consists of: (1) ongoing automated sales conducted on liquid carbon exchanges; (2) over-the-counter sales through dealers in the case of high volumes of CERs; and (3) further requests for guidance from the CDM Executive Board under exceptional market circumstances.

[18] The sale of the CERs received by the Adaptation Fund on exchanges could continue if the volume is relatively small. Alternatively, the CERs collected by the Adaptation Fund could be included in periodic auctions.