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SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE

Tenth session

Bonn, 31 May - 11 June 1999

Item 12 of the provisional agenda

SUBSIDIARY BODY FOR IMPLEMENTATION

Tenth session

Bonn, 31 May - 11 June 1999

Item 8 of the provisional agenda

**PRINCIPLES, MODALITIES, RULES AND GUIDELINES FOR THE  
MECHANISMS UNDER ARTICLES 6, 12 AND 17 OF THE  
KYOTO PROTOCOL**

**Submissions from Parties**

**Note by the secretariat**

**Addendum**

**Corrigendum**

**Paper No. 3: Switzerland**

**Replace original text [see attached submission]**

**FCCC/SB/1999/MISC.3/Add.2/Corr.1**

**BNJ.99-77**

**SBSTA/SBI 10: Non-paper regarding  
Swiss views on pre-2008 joint implementation**

The Kyoto Protocol is silent on the issue as to when joint implementation can commence<sup>1</sup>. It is only clear in Art. 3.10/3.11 that any transfers or acquisitions of ERUs<sup>2</sup> that occur prior to 2008 would have to be accounted for in the first budget period. In our view, this lack of clarity is an artifact of the negotiation process in Kyoto, where Art. 6 of the draft negotiating text was not treated until the final session of the Committee of the Whole when the text was put forward for adoption. At that late stage, there was no opportunity to bring in amendments to the text<sup>3</sup>.

There are a number of reasons why **Switzerland believes that JI should be launched in parallel with the CDM**. First of all, we have heard **no substantive arguments for delaying JI** and, in our view, an early start to JI would not require any amendment to the KP, as long as all acquisitions/transfers were accounted for in the first budget period, as required under Art. 3.10/ 3.11. Without objective reasons to the contrary, all countries should thus be treated equally and be able to exercise their right to market their climate protection services. It should be noted that, during the AIJ pilot phase, **JI host countries have devoted substantial resources to establishing the necessary know-how, institutions and procedures for participating in JI**. It would therefore seem unjust to exclude them.

Secondly, there is **more environmental integrity built into the JI mechanism** than into the CDM, since CDM host countries have no emission caps. This is the reason that Switzerland pushed for JI initially with Annex I countries, expanding to non-Annex I countries once reliable methodologies for baseline and additionality determination could be developed based on practical experience from JI projects. From an environmental perspective, it is also important to realize that **JI projects launched prior to 2008 would tend to mitigate the "hot air" problem** that exists in some central and eastern European countries. This phenomenon is illustrated in the box on the following page (which was originally presented in a Swiss non-paper on the "hot air" benefits of early JI during COP4 in Buenos Aires).

Finally, immediate action by Parties to implement the Kyoto Protocol is necessary to achieve the objective of reducing the overall emissions of greenhouse gases by Annex I Parties by at least 5% below 1990 levels in the commitment period 2008-2012. Coupled with the requirement that ERUs acquired through JI transactions shall be supplemental to domestic action<sup>4</sup>, allowing JI transfers from the year 2000 could provide an **additional incentive for Parties to act sooner, rather than later to implement the Kyoto Protocol**. Allowing pre-2008 JI paves the way, for example, for domestic policies to link national reduction efforts with JI investments abroad. Furthermore, well-designed JI projects can have a multiplier effect in the project host country in terms of technology diffusion, resulting in additional emission limitations.

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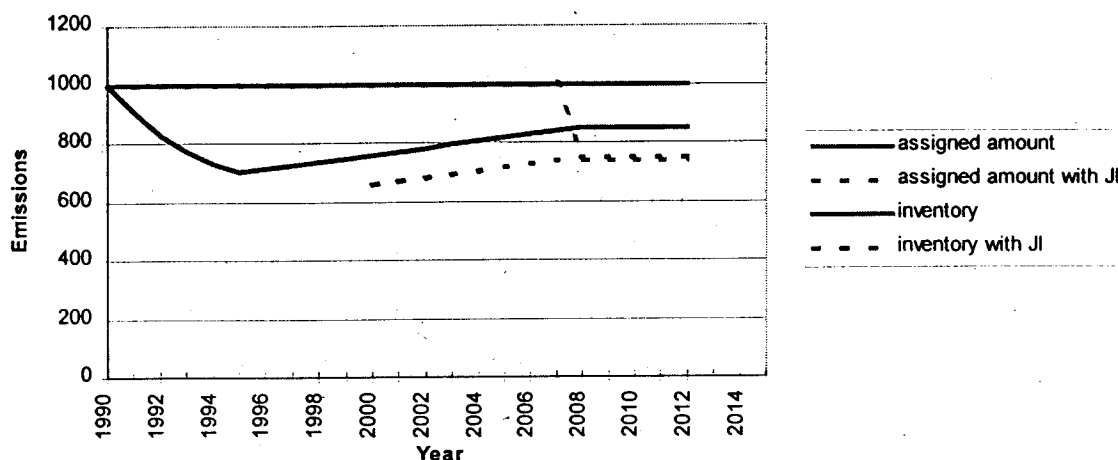
<sup>1</sup> In contrast, Art. 12.10 implies that CERs may be acquired under the clean development mechanism beginning in 2000.

<sup>2</sup> ERU = emission reduction unit

<sup>3</sup> Switzerland, in fact, had drafted negotiating text for Art. 6 to the effect that JI could begin with entry into force of the KP (and consulted with numerous other delegations on it), but we never had the opportunity to introduce it in a contact group or the Plenary.

<sup>4</sup> In order to ensure that pre-2008 JI/CDM neither delay the introduction of domestic climate protection legislation and the initiation of domestic mitigation efforts, nor lead to higher net Annex I emissions than would have otherwise been the case, care will have to be given to operationalizing the complementarity requirements of these Articles. Otherwise cumulative Annex I emissions prior to 2008 could rise above the business-as-usual trajectory. Although this phenomenon would not be subject to any binding obligations under the Kyoto Protocol, it would have a negative impact on the climate system.

### Effect of pre-2008 JI on assigned amount



Assuming that all transfers of ERUs that occur prior to 2008 must be accounted for in the first budget period (according to Art. 3.11), joint implementation projects launched prior to 2008 would tend to mitigate the "hot air" problem. The hypothetical data in the attachment illustrate this phenomenon. In this example, the assigned amount of the selling country is 1000 units of emissions (solid red line) and the emissions inventory follows the path indicated by the solid blue line. This country therefore has 150 excess assigned amount units per year during the commitment period (which might be considered as "hot air", in the example given). If this country were to launch JI projects in the year 2000 with a lifetime of 15 years and resulting in a total of 100 units of greenhouse gas emission reductions per year, then the emission inventory of the selling country would follow the path of the dashed blue line. The JI transfers would have to be accounted for according to Art. 3.11 in the first commitment period (100 units/year between 2000 and 2007, giving a total of 800 units, plus 100 units during each year in the budget period, since the projects are assumed to have a 15-year crediting time). This accounting results in an annual reduction of the assigned amount during the first budget period of 260 units, which lowers the assigned amount to 740 units ( $1000 - (800/5) - 100$ , dashed red line). In this example, the country that transferred ERUs prior to 2008 would have no more excess of assigned amount units above the level of its emission inventory.

Switzerland therefore believes that the COP/MOP guidelines for JI should explicitly state that JI can commence in 2000 (in parallel with the CDM) for the following reasons:

- An early start to JI is compatible with the the Kyoto Protocol, and we are aware of no substantive arguments for delaying JI. In fact, we are convinced that more environmental integrity is built into the JI mechanism than into the CDM, since JI Parties have QELRCs<sup>5</sup>.
- The issue of when JI can commence is not unambiguously defined by the Protocol and should be agreed by the COP/MOP; otherwise, different rules will be applied by Parties. Furthermore, it would be very difficult to prevent "early JI" agreements among Parties, since ERUs and AAUs are by definition fungible.
- JI host countries have devoted substantial resources to establishing the necessary know-how, institutions and procedures for participating in JI.
- JI projects launched prior to 2008 would tend to mitigate the "hot air" problem, since all emission reduction units transferred by a host county to an investor prior to the commitment period would have to be accounted for during the commitment period (i.e. subtracted from the host country's assigned amount, which would tend to reduce the volume of "hot air" available for trading).
- Parties (and private companies) will invest in *additional* climate protection projects in Annex I countries, compared to the situation without JI. Thus these projects will result in real and additional reductions in sources or enhancement of anthropogenic removals by sinks of greenhouse gases.
- As is the case with the CDM, JI can provide an added incentive for Parties to act sooner, rather than later to implement the Kyoto Protocol both domestically and through the two mechanisms.

<sup>5</sup> QELRC = quantified emission limitation and reduction commitment

	assigned amount	assigned amount with JI	inventory	inventory with JI
1990	1000	1000	1000	
1991	1000	1000	910	
1992	1000	1000	830	
1993	1000	1000	770	
1994	1000	1000	730	
1995	1000	1000	700	
1996	1000	1000	712	
1997	1000	1000	723	
1998	1000	1000	735	
1999	1000	1000	746	
2000	1000	1000	758	658
2001	1000	1000	769	669
2002	1000	1000	781	681
2003	1000	1000	792	692
2004	1000	1000	804	704
2005	1000	1000	815	715
2006	1000	1000	827	727
2007	1000	1000	838	738
2008	1000	740	850	750
2009	1000	740	850	750
2010	1000	740	850	750
2011	1000	740	850	750
2012	1000	740	850	750
2013				
2014				
2015				

## SBSTA/SBI 10: Non-paper regarding

### Swiss views on validation, monitoring and verification/certification (VMVC) procedures for CDM projects

As pointed out in our recent submission (FCCC/SB/1999/MISC.3/Add.1), Switzerland believes that – for each of the three Kyoto Mechanisms – there is a need for independent validation/certification. The purpose of this additional submission is to present simple descriptions of the procedures that are needed for cooperative projects implemented under Art. 12 (mitigation projects under the CDM), in order to foster a common understanding of the steps in the process<sup>1</sup>. These basic steps – as well as the responsible entities and the tasks to be performed at each stage – are summarized in the diagram on the following page, which we hope can help to focus the discussion at SBSTA/SBI 10 on those parts of the process where there might be a divergence of views.

#### Basic steps in the process

The very first step of the process is for the host country government and the governments of all investing entities to **officially approve the given project**, as called for in Art. 12.5(a) for the CDM. In our view, this step is generally uncontroversial. An exception is the question of how to ensure that emission mitigation projects also "assist non-Annex I Parties in achieving sustainable development". Whether this determination can merely be left up to the host country governments to decide without adopting any principles, guidelines or indicators is an issue that we believe deserves further consideration.

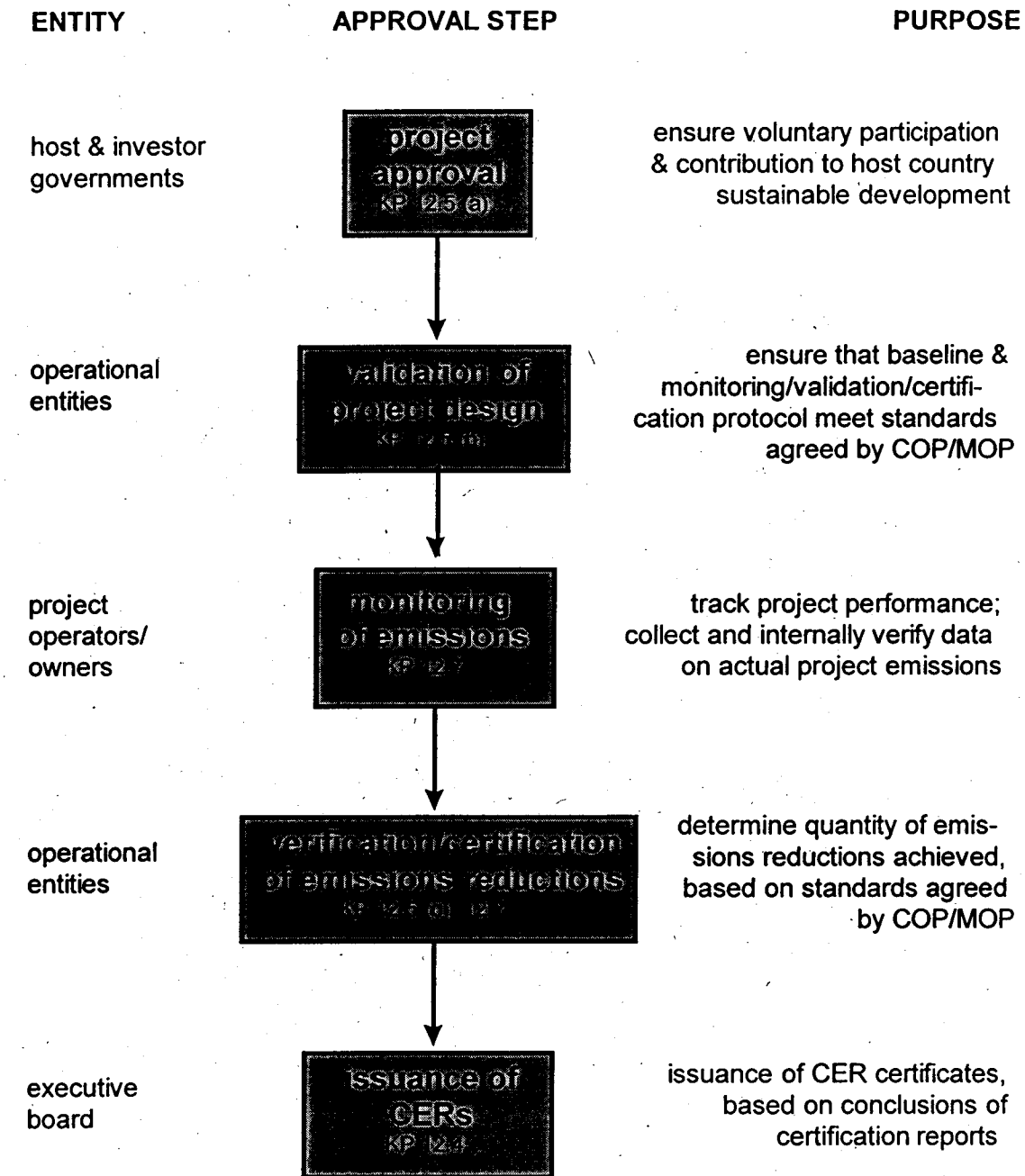
Following Party approval, the **design of each project must be independently validated** to ensure that the project is consistent with any project eligibility criteria and has a baseline that meets agreed standards (Art. 12.5). Project validation also ensures that the planned monitoring and verification of actual emissions is adequate (Art. 12.5, Art. 12.7). In order for the operational entities to be able to assess project design with respect to these three items, objective standards must be established for each of them by the COP/MOP. With respect to baselines, for example, the COP/MOP might define one or more acceptable methodologies for establishing a credible baseline. Any substantial objections of stakeholders must also be evaluated during the validation process. The validation report must be submitted to the executive board for acceptance or rejection.

Once the project is validated, it can be implemented. During the operational phase of the project, its performance in terms of **actual emissions must be monitored**. Monitoring is generally carried out by the plant operator (in the case of an energy supply project) or project manager (for example, in the case of a demand-side management or forestry sink project). Monitoring can be automated or manual, continuous or periodic and will depend on the type and scale of project. Through the previous process of project validation, the adequacy of the monitoring plan (method, frequency, accuracy) will have been evaluated against the standards laid down by the COP/MOP. **The recorded monitoring data should be checked routinely** to ensure that there are no errors (this can be an internal or external process, and can be left to the discretion of the project partners).

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<sup>1</sup> Although similar procedures might be needed in the JI context, for the sake of simplicity, this process description is based on the terminology and requirements for CDM mitigation projects under Art. 12.

# Procedures for CDM projects



Depending on the detailed rules agreed to by the COP/MOP, the **actual emission reductions achieved by the project must be verified<sup>2</sup>** by an independent operational entity. This certifi-

<sup>2</sup> This step is referred to as „certification“ in Art. 12.5(c), but under existing certification schemes (such as that for environmental management systems under ISO), the term „certification“ generally applies only to the act of issuing a certificate (a function we believe should be performed by the executive board), based on a prior verification (in the context of the CDM, of actual emissions reductions). To avoid confusion with current practice, we recommend that the COP

ation might take place on an annual basis, but could be agreed by the project partners (for some projects, less frequent certification might be preferable). Certification will involve checks to ensure that the project still meets the criteria as it was originally validated and that the monitoring data are accurate and meet the agreed standards. It will also involve a determination of actual emissions based on a comparison of the actual emissions data with the ex ante project baseline. The report of the operational entity will state whether the project meets the necessary requirements as well as the amount of emissions reductions achieved by the project in the period since the last certification was performed.

Based on this report, the executive board of the CDM can issue certificates for the CERs achieved by the project.

#### **Accreditation and spot-checks of operational entities**

Operational entities must be accredited to perform validation and verification/certification on the basis of a set of protocols (or standards) adopted in advance by the COP/MOP.

Art. 12.5 states that the operational entities are to be "designated" by the COP/MOP, but there would be obvious advantages, if the COP/MOP delegated the task of "designation" (accreditation is a more appropriate term) to the executive board or to national/regional accreditation authorities, for example, avoidance of administrative bottlenecks. An important advantage of the latter approach (which is analagous to the existing practice under the International Standards Organisation) would be that the accreditation process would be depoliticized. If this avenue were pursued, the COP/MOP could mandate the executive board to undertake random audits of the audit entities and the operational entities to ensure that they are acting consistent with the standards set by the COP/MOP. Otherwise, the executive board would have a conflict of interest (both designation and controlling of the same entities). For the same reason, the same operational entity should not be involved in both validation and certification of the same project.

#### **Link between the VMVC system under the CDM and the Art. 8 review process**

If such an VMVC system were established, it would only apply to those Parties that choose to engage in emission reduction projects under the CDM, and would have to be linked to the entire system for measurement, reporting, review and compliance under the Protocol (including the expert review process under Art. 8, which applies only to Annex I countries). The review process in Art. 8.1 and the expert reviews under Art. 8.2 might be used to spot check the performance of the operational entities acting in those Annex I Parties engaging in JI, CDM or emissions trading. The Art. 8 reviews, however, could not replace the validation and verification/certification process for the CDM.

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adopt a clear definition „certification“. To avoid a semantic debate, this paper refers to „verification/certification“ and distinguishes this from the actual issuance of certificates for CERs.

SB-10: Non-paper regarding a  
**Swiss proposal for a post-verification trading model on an annual basis**

International emission trading has to be simple, environmentally credible and robust. Rules that are too complicated would cause unnecessarily high transaction costs, whereas failure to ensure credibility and limit uncertainty would reduce confidence in trading. Switzerland believes that **"post-verification" trading is simple, environmentally sound and robust**. The main advantage of the post-verification approach is that it **eliminates the need for complicated liability and trade-specific compliance rules**, since trading is limited to assigned amount units certified to be valid (excess allowances).

#### **GENERAL DESCRIPTION**

The basic idea behind the post-verification model is that assigned amount units can not be transferred until they are demonstrated to be excess to a Party's emissions.

Switzerland proposes that Annex I Parties have the option to adopt post-verification trading on an **annual basis**, not just at the end of the commitment period. This will help both Parties that wish to acquire, and those that wish to transfer, assigned amount units to better implement their national compliance plans.

Switzerland proposes that annual post verification trading operate as follows:

- The Party notifies the UNFCCC Secretariat prior to the start of the commitment period how it wishes to allocate its total assigned amount among the five years of the commitment period. The Party could allocate its assigned amount in any manner it wishes, subject to a restriction on the range assigned to any single year (e.g., +/- 20% of the annual average). This allocation procedure is illustrated with hypothetical data in the Annex.
- It might be necessary to require Parties that wish to engage in emission trading to implement emissions inventory standards stricter than those required for all Parties under Article 5. An independent entity would need to certify that the national inventory meets the required standard at periodic intervals (e.g., every five years). The initial certification could be performed prior to 2008 to allow trading to start promptly.
- The excess assigned amount units (AAUs) for a given year are calculated as follows:

$$\begin{aligned} & \text{cumulative assigned amount allocation from 2008 through the given year} \\ & - \text{cumulative emissions from 2008 through the given year}^1 \end{aligned}$$

In addition, the amount of certified excess assigned amount units issued in previous years, would have to be subtracted to obtain the annual excess for the current year. Holdings of certified AAUs, Article 6 emission reduction units and Article 12 certified emission reductions are not included in the calculation of excess AAUs. However, there is no restriction on further transfer of these certified AAUs, Article 6 emission reduction units and Article 12 certified emission reductions. This calculation is illustrated with hypothetical data in the Annex.

- The UNFCCC Secretariat would issue certificates for the excess assigned amount units (AAUs) earned during the year.

The Party can choose to use the certified excess AAUs in any of a variety of ways. It can (1) hold them to comply with its Article 3 obligations at the end of the commitment period (emissions in later years may exceed the assigned amount allocated to those years, in which case certified AAUs from earlier years would be needed to achieve compliance), (2) transfer them to other eligible Parties, (3) transfer them to legal entities, or (4) hold them for use during future commitment periods.

**The annual comparison of allocated assigned amount and actual emissions is distinct from assessment of compliance with QELRC commitments under Article 3.** Assessment of compliance

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<sup>1</sup> Any cumulative transfers of Article 6 emission reduction units to other Parties from 2008 through the given year would also have to be subtracted.



with these commitments takes place at the end of the commitment period and involves an expert review under Article 8.

This proposal would continue across commitment periods. Specifically, during a second (or later) commitment period a Party could not earn excess AAUs until its cumulative actual emissions since 2008 are less than its cumulative allocated assigned amount since 2008.

## **ADVANTAGES**

### Simplicity/transparency -> low transaction costs

One important advantage of post-verification trade is that the system is simple and transparent: All data are readily available and the needed calculations are simple. Furthermore, only the UNFCCC Secretariat issues certificates for excess AAUs and, once issued, the excess AAUs are, by definition, valid. Therefore no liability procedures are needed for the trading system itself. Simplicity and transparency should result in low transaction costs and lower trading prices.

### Environmental credibility

Post-verification trade ensures environmental credibility and provides positive incentives for compliance. First of all, by definition, a post-verification trading model eliminates the risk of „overselling“, because only certified excess AAUs can be traded. The potential for non-compliance caused by trading is also significantly reduced, although there is no guarantee that Parties issued certificates for excess AAUs will be in compliance with their QELRCs at the conclusion of the commitment period. The Swiss approach also provides systematic incentives to ensure adequate inventory systems, to report inventories in a timely fashion and to take early action to bring emissions within the allocated annual allowances.

### Seller/buyer certainty

Post-verification trade ensures full seller/buyer certainty, which has the following advantages: (1) market makers have certainty that all AAUs available on spot markets<sup>2</sup> are valid and will not be subject to multilateral compliance checks and non-compliance resolution process at the conclusion of the commitment period; and (2) the proposed system rules out trades of „junk“ AAUs (analogous junk bonds). Seller/buyer certainty will also tend to result in lower trading prices (no risk premium needed).

### Harmonisation in trade issues with the other mechanisms of the Protocol

Because of their project-based nature, JI under Art. 6 and CDM under Art. 12 also operate on a post-verification basis. Adopting the post-verification approach to emission trading, therefore, will ensure coherent verification rules for all three mechanisms. Given the fact that the magnitude of uncertainty with respect to inventory data under Art. 17 is much larger than any uncertainty in emissions reductions associated with individual JI or CDM projects, we feel that a post-verification approach to allowance trading is justified. This consistent treatment of the mechanisms would tend to level the playing field and limit competitive trade distortions between emission trading and the project-mechanisms.

## **CONCERNS**

### Restricting rights granted by the Protocol

Since Art. 3 states that „any part of the assigned amount“ can be transferred, some see the post-verification trading model as an undesirable restriction of the Protocol. Switzerland would argue that all rules for the trading system remain to be defined. Art. 17 states no preference for any trading system design elements.

### Limits to the volume of trading

Post-verification trading limits the tradeable volume to the excess of annual allowances over actual emissions, whereas other models would allow Parties to trade up to their total assigned amount. This limit to the trading volume might result in higher trading prices. Switzerland would argue that this potential negative effect on prices is overcompensated by the tendency of the advantages of the post-

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<sup>2</sup> Markets will take care of risks associated with forward trades.

verification trading model – simplicity, transparency and seller/buyer certainty – to reduce trading prices.

#### Delay in trading

Under a post-verification system, trade cannot take place until excess AAUs are issued by the UNFCCC Secretariat (delay of a maximum of 1.5 - 2 years), whereas other models would allow trades as of 1 January 2008. Switzerland would argue that only spot trades are delayed and that this delay is only a one-time effect at the start of the first commitment period. Taking into account the fact that achieving the ultimate objective of the Convention will be a long-term effort, we regard this initial time lag to be insignificant<sup>3</sup>. Experts in financial markets generally also dismiss this delay concern, since most trades will be forward trades (for every trading model, post-verification or not, markets will take care of risks associated with forward trades.)

#### Access of legal entities to the international trading system

The question has been raised as to whether the post-verification trading model can also accommodate legal entity trading. We address this issue by analysing the situation for three different scenarios of domestic policy on the involvement of legal entities in emission trading:

- Scenario 1: only Parties trade internationally; no international or national allowance trading is allowed for legal entities

If a Party decides that it does not wish to allow its legal entities to trade, there are no additional implications of adopting the post-verification model presented above. In the framework of its domestic policy, a Party could still provide incentives for its legal entities to *acquire* AAUs (e.g. a refund of energy taxes levied in exchange for AAUs acquired), but the post-verification model would have no implications for such acquisitions (all certificates available on the market must have been issued by the UNFCCC Secretariat, are valid by definition, and can be bought by legal entities as well as Parties).

- Scenario 2: only Parties trade internationally; legal entities engage in domestic emission trading  
Here again, such a domestic policy regime would be compatible with the post-verification model presented above, with no need for additional stipulations.
- Scenario 3: Parties trade internationally; legal entities can trade domestically and internationally  
As explained above, the post-verification model would have no implications for acquisitions of excess AAUs by legal entities. If a Party also wants to authorize legal entities under its jurisdiction to participate in the international trading system as seller, the Party would have to legislate emission caps for individual legal entities and devise a system to transfer certified excess AAUs it receives from the UNFCCC Secretariat to those entities that emit less than their cap. However, the need for such a cap and trade system is not unique to the post-verification model.

Thus in our estimation, the post-verification model can fully accommodate legal entity trading.

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<sup>3</sup> Still, solutions could be considered, if decided essential, such as using the previous year's data.

**Example Calculations for Post-Verification Trading on an Annual Basis**

<b>Example 1</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>Total</b>
Assigned amount (2008-2012)						5000
Annual allocation of AAUs	1200	1100	1000	900	800	5000
Actual emissions	1100	1050	1000	800	750	4700
Cumulative annual allocations	1200	2300	3300	4200	5000	
Cumulative actual emissions	1100	2150	3150	3950	4700	
Cumulative excess AAUs	100	150	150	250	300	
Certified AAUs issued each year	100	50	0	100	50	300
<b>Example 2</b>						
Assigned amount (2008-2012)						5000
Annual allocation of AAUs	1200	1100	1000	900	800	5000
Actual emissions	1100	1050	1000	1000	800	4950
Cumulative annual allocations	1200	2300	3300	4200	5000	
Cumulative transfers of Article 6 ERUs	10	20	30	40	50	
Cumulative actual emissions	1100	2150	3150	4150	4950	
Cumulative excess AAUs	90	130	120	10	0	
Certified AAUs issued each year	90	40	0	0	0	130
Certified AAUs needed for compliance						130