

## Views Regarding the Improvement to emissions trading and the project based mechanisms (AWG-KP)

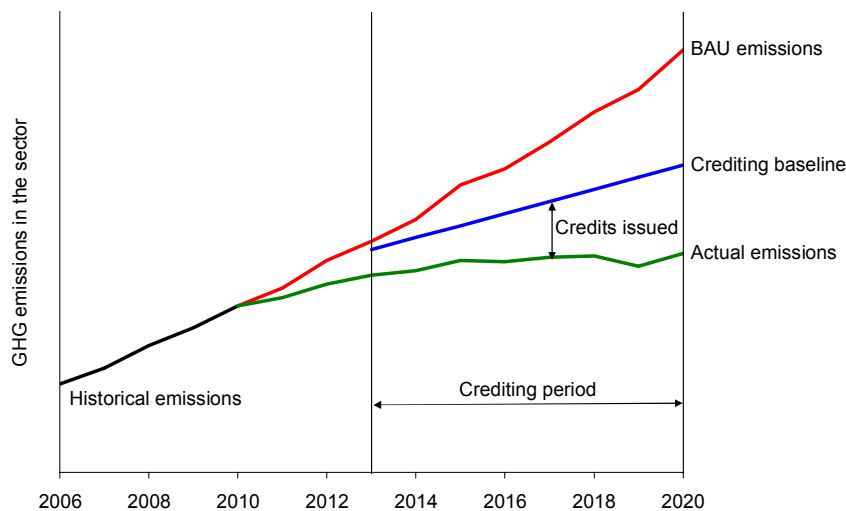
### Introduction

The GWEC welcomes the opportunity to submit its views on the means of Improvement to emissions trading and the project based mechanisms(AWG-KP)

This submission focuses on how a sectoral crediting mechanism (SCM) could be designed and implemented under a post-2012 climate regime. It aims at proposing practical recommendations how such a mechanism could be implemented. It discusses opportunities and key challenges of the mechanism in the light of the need to limit global warming to a maximum of 2°C above pre-industrial temperature levels. The submission is partly based on a study commissioned by the GWEC and currently being prepared by Öko-Institut in Germany.

Under the AWG-KP, two similar concepts have been proposed: a sectoral CDM and sectoral no-lose targets. We believe that these concepts are very similar and should therefore be discussed together as a “sectoral crediting mechanism” – a term introduced by Baron and Ellis (2006).

Under a SCM, emission reductions are credited against a *crediting baseline*. All entities in a given sector are covered by the mechanism. Internationally tradable credits are issued if the emissions in the respective sector are reduced below a defined crediting baseline. No sanctions will apply if the actual emissions exceed the crediting baseline. The following figure illustrates how a SCM would work.



The introduction of a sectoral crediting mechanism (SCM) could be an interesting option for a post-2012 climate regime, for several reasons:

- It could enable an up-scaling of the global carbon market and thus provide enhanced incentives for developing countries to contribute to global GHG reduction efforts.

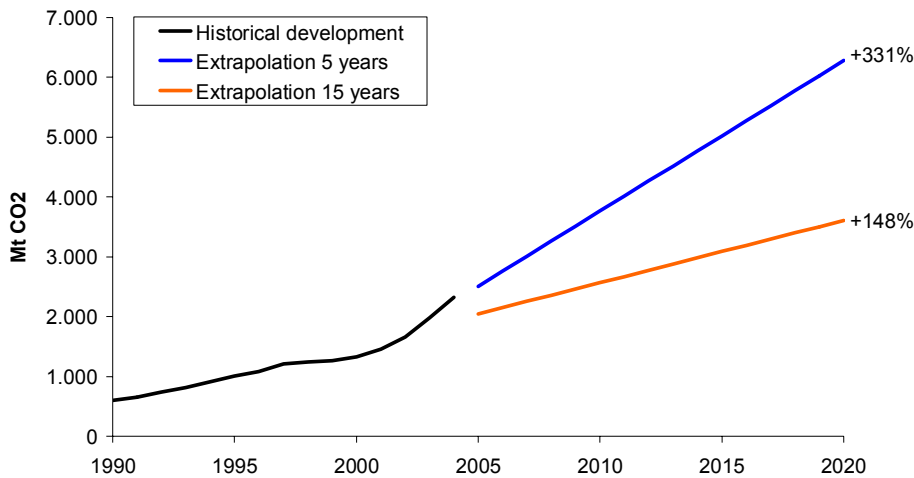
- The participation is not binding. The voluntary nature and the strong incentives of the mechanism could make this instrument interesting for a large group of developing countries.
- The mechanism avoids the counterfactual and hypothetical question whether individual projects are additional which has proven to be difficult to assess with a reasonable certainty.
- The mechanism allows developing countries to get credits from implementing policies and measures or establishing enabling frameworks for enhanced mitigation which is not possible under the current rules of the CDM but a key prerequisite for enhanced mitigation action in some sectors.
- While the current CDM is a pure offset mechanism, the SCM enables developing countries to contribute to global emission reduction efforts if the crediting baselines are set below the business as usual (BAU) emissions development in the covered sectors.

However, a SCM faces also several challenges. Key challenges are collecting reliable data, defining the sector and its boundaries, uncertainty in estimating the sectoral crediting baseline, the division of responsibilities and revenues between covered companies and the national government and the integration into the current architecture of the carbon market. Moreover, a SCM has limits in addressing carbon leakage due to international competition given that the participation in the mechanism is voluntary. In the following, some of these issues are explored and practical recommendations for designing a SCM are provided.

### **Determining crediting baselines**

Determining the crediting baseline is the most important challenge of a SCM. The future development of GHG emissions in a sector is difficult to predict. GHG emissions are driven by many factors, such as economic growth, population growth, international fuel prices, technological innovation, the development of lifestyle patterns, and so forth. Consequently, any prediction of the BAU development of GHG emissions is associated with a considerable uncertainty. In practice, past trends of GHG emissions are not a sufficient proxy for the future development. The considerable uncertainty regarding the future emissions development is illustrated in the following figure, where historical emission trends are extrapolated in different ways for the electricity and heat generation sector in China.

### CO<sub>2</sub> emissions from electricity + heat generation in China



Source: IEA

The significant uncertainty with regard to the development of future GHG emissions poses a considerable risk to the success of such a mechanism. If the crediting baseline is chosen too high, the global carbon market may be swamped with credits without any real emission reductions. If the baseline is chosen too low, no credits may be issued despite considerable efforts by the country to reduce emissions. A key challenge is thus factoring out the signal (the measures undertaken to reduce GHG emissions in the sector) from the noise (changes in exogenous factors, such as economic growth, population growth, etc). For this reason, particular attention should be paid to how sectoral crediting baselines are established.

#### **Crediting baselines should be clearly below business-as-usual emissions**

Crediting baselines below BAU emissions ensure that the mechanism contributes to a net GHG emission reductions on a global scale and provide some safeguards against an inflation of the crediting baseline. In determining the ambition of the baseline, several issues need to be considered:

- **Global mitigation needs.** The fourth assessment report by the IPCC highlights that substantial deviations from business as usual emissions are necessary in developing countries by 2020 in order to limit global to 2°C above pre-industrial levels. This may require a deviation by 15-30% from BAU emission levels in 2020. Therefore, crediting baseline would need to be set considerably below BAU emission levels.
- **Incentives for developing countries.** More ambitious crediting baselines reduce the credits issued and may thus reduce the incentives to participate in the mechanism. Hence, there is a trade-off between the net atmospheric mitigation contribution and the financial incentives from the mechanism. This trade-off could be mitigated if industrialised countries support the reduction of GHG emissions in the sector not only through the carbon market but with additional financial and technical support. Such support could help developing countries to committing to more ambitious sectoral crediting baselines.

- **Supply and demand in the carbon market.** The introduction of SCM on a large scale requires sufficient demand for credits from industrialised countries. An oversupply of credits could result in very low prices and thus low financial revenues and incentives for developing countries to achieve or go beyond the baselines.

**Use of indexed crediting baselines and separate crediting baselines for different products and services can help factoring out the signal from the noise**

Crediting baselines must be determined in an absolute level of tons of GHG emissions in order to issue credits. However, the absolute level of the crediting baseline could be determined *ex-post*, based on previously defined criteria (indexes). In the case of such indexed baselines, the previously defined indexes (e.g. the GDP) are monitored *ex-post*, and the absolute crediting baseline is calculated *ex-post* based on the *ex-ante* determined index rate (e.g. t CO<sub>2</sub> per GDP) and the *ex-post* monitored index (e.g. the GDP). It is important that indexes are defined in a way that allows factoring out the most important noises (e.g. economic growth) while ensuring that all major mitigation opportunities can still be credited. For example, if power generation is used as index for the power sector, this would only allow crediting measures to reduce the GHG intensity of power generation but exclude measures to reduce electricity consumption or to reduce transmission and distribution losses in the power system. In contrast, if the GDP is used as index, this would allow factoring out the role of economic growth from the crediting baseline. In some cases, it could be possible to use several indexes for one crediting baseline. For example, it could be adequate to index the electricity sectors emission on GDP and ambient temperatures if the electricity consumption is significantly influenced by heating or cooling devices such as air conditioning or space heating.

In some sectors, changes in the demand for different products or services can significantly affect GHG emissions. In this case, separate baselines could be established for different products or services of the sector in order to better factor out changes in the demand for the products or services. For example, in the transport sector, crediting baselines could be differentiated between passenger and freight transportation, or also between different transport modes or vehicle types. Which approach is most appropriate depends on the sector and the measures envisaged to reduce GHG emissions.

**Under certain circumstance absolute baselines could be required**

Absolute emissions baselines use a straight-forward metric to measure emission reductions in a sector: Actual GHG emissions in tons of CO<sub>2</sub> equivalent are compared to an absolute level of baseline emissions. The most important advantage of absolute emissions baselines is that all measures to reduce GHG emissions in the sector can be credited. For example, in the power sector an absolute emission baseline allows crediting measures to decrease electricity demand, measures to reduce transmission and distribution losses, as well as measures to reduce the GHG intensity of power production.

The determination of the crediting baseline is an important challenge for the functioning of a SCM. This challenge is particularly demanding in the case of absolute emission baselines. GHG emissions in a sector are driven by many factors, such as economic growth, population growth, international fuel prices, technological

innovation, the development of lifestyle patterns, and so forth. A reliable prediction of these drivers is in most cases can be very difficult, in particular over longer time periods. Consequently, any prediction of the business-as-usual development of absolute GHG emissions is associated with a considerable uncertainty. As a result, the integrity and stringency of absolute emission baselines depends heavily on how they are derived and whether the emission drivers actually develop in the expected manner. However, there are possibilities that the uncertainties of the absolute credit baseline setting could be reduced by a yearly, or 3 years, based adjustments of the absolute target based on a review of the factors that have heavy influence on the emissions.

**Proposals for crediting baselines should be supported by thorough documentation**

A thorough analysis of the GHG emission trends and projections and their drivers is a key prerequisite to assess the ambition and appropriateness of a proposed sectoral crediting baseline. A proposal for a sectoral crediting baseline should therefore be accompanied by historical data, including on GHG emissions and production in the sector, the structure of the industry (e.g. age and technologies of facilities in the sector) and information on key emission drivers of the sector (e.g. fuel prices). The collection of such data could be challenging. However, the lack of reliable data can easily result in the establishment of inappropriate crediting baselines. Therefore, minimum requirements regarding available data should be agreed as eligibility criteria to participate in the mechanism. The baseline should be conservatively adjusted downwards if the underlying data includes high uncertainties.

A proposal for a SCM should also be accompanied by a sensitivity analysis and uncertainty assessment of the future GHG emissions development in the sector. The sensitivity analysis should provide a variation of all key emission drivers by a plausible range. This can help to assess the stringency of the sectoral crediting baseline. For example, if the lower bound of the uncertainty range of future GHG emissions is lower than the sectoral crediting baseline, there is a certain chance that BAU developments of GHG emissions are credited. The uncertainty could then be addressed by selecting a more stringent crediting baseline in case of higher uncertainties and a less stringent baseline in case of lower uncertainties. This approach is already applied in the CDM where baseline emissions are adjusted downwards in case of considerable uncertainty.

**Consistent methodological approaches should be used for determining the sectoral crediting baseline and monitoring emissions**

In developing the crediting baseline and monitoring actual emissions the same methodological approaches and data sources should be used. The use of different data sources or approaches could result in a significant bias of the crediting baseline. The use of the same data and approaches reduces the uncertainty. For example, a systematic error within the data or approach then results in a similar over- or underestimation in both the crediting baseline and the actual emissions, and hence a lower error in the level of emission reductions. A practical challenge could be the lack of sufficiently detailed historical data. In this case, a future year or time period could be used to derive the crediting baseline. For example, detailed data could be collected for the years 2010 to 2012 and be used to derive the final crediting baseline from 2013 onwards.

**Technical review and assessment**

A proposed sectoral crediting baseline should be assessed and reviewed by an independent international technical team under the guidance of an international regulatory agency (see further below). This independent review should provide an independent assessment of the accuracy, transparency, conservativeness and appropriateness of the proposal and, if necessary, propose adjustments to the proposal.

**How and when should sectoral crediting baselines be agreed?**

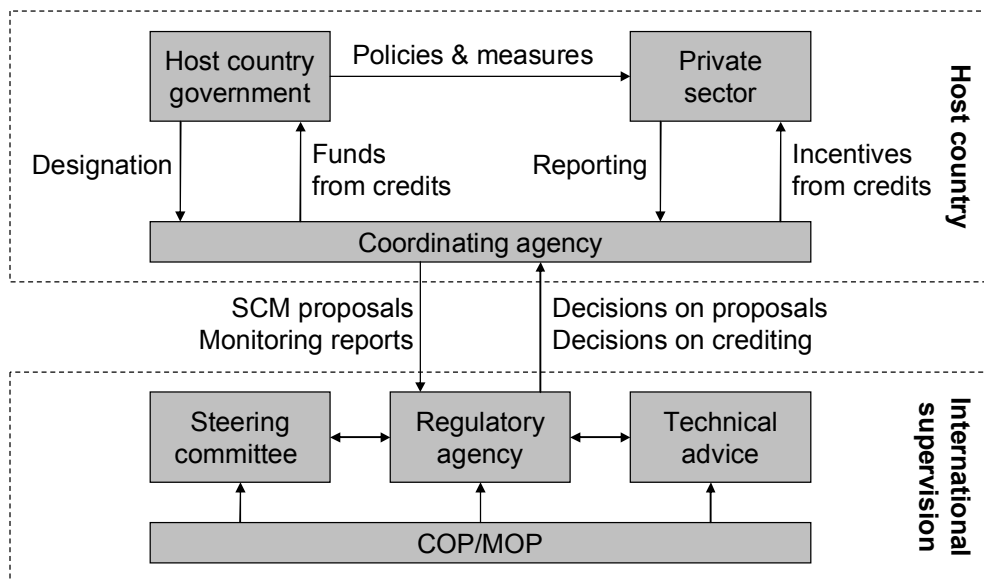
Sectoral crediting baselines could be either be negotiated as part of a new international climate treaty or could be determined in a process following an agreement on key principles of a SCM in the new international climate treaty.

The negotiation of baselines as part of a climate treaty provides more certainty for Parties and the private sector and thereby facilitates an early implementation of the mechanism and the ratification the treaty. On the other hand, it is questionable whether developing countries will be ready to agree to ambitious crediting baselines in the absence of precise data from the sector and significant uncertainty regarding future emission developments. A technical process to collect relevant data, to prepare emission projections, to assess potential policies and measures to reduce emissions, and to review all information could help to ensure that crediting baselines are actually meaningful. However, such a process would delay the implementation of a SCM and the outcome depends on the success of the process and on the willingness of developing countries to develop proposals for implementing a SCM.

A way forward could be an agreement in a climate treaty on key principles of a sectoral crediting mechanism, including on principles for the ambition of the baseline. For example, the treaty could specify that sectoral crediting baselines should be set at least X% below BAU emissions, should reflect all policies and measures adopted by a certain date, should take into consideration future policy objectives of the country (e.g. established policy targets for energy efficiency and renewable energy), and/or should be set at least at the no-regret mitigation potential in the sector. Based on such principles, the final agreement on the baselines could then be delegated to a technical process, under the supervision of a regulatory agency.

**Governance arrangements**

The introduction of a SCM requires strong governance arrangements within the host country and at international level. Within the host country, several entities may be involved in proposing and implementing the SCM. At international level, the mechanism needs to be supervised and regulated. The following figure illustrates how the mechanism could be arranged institutionally.



**A national coordinating agency within the host country**

The host country should be responsible for proposing, implementing and monitoring the SCM. It seems advisable that one entity (the “coordinating agency”) takes the responsibility of co-ordinating all activities within the host country. A timely assignment of a coordinating agency is important to make a SCM operational, in particular because the collection of relevant data and development of a proposal for a SCM may consume considerable time. A national steering committee with government representatives and stakeholders from non-governmental organizations may supervise the work of the coordinating agency. To facilitate the effective and timely planning and implementation of a SCM, it is important that the agency has sufficient financial resources. The establishment of national coordination agencies could be supported either through bilateral or multilateral official development aid (ODA) or through a dedicated fund that becomes part of an international climate agreement. To encourage SCM proposals, countries which commit themselves by a certain date could benefit from access to international funds for developing SCM proposals.

**The private sector must have strong incentives to reduce GHG emissions**

A SCM will only be successful if the private sector has strong incentives to reduce emissions. In a SCM agreement such incentives could be basically passed-through in two ways:

- 1) The host country could adopt policies and measures that provide the necessary incentives for the private sector (e.g. a feed-in tariff for renewable energy). In this case, the host country receives the credits and may use them to finance the policies and measures and to support the sector in reducing the emissions.
- 2) Entities in the covered sector could directly receive credits and sell them on the carbon market.

The use of policies and measures allows selecting the most suitable policy instruments to encourage emission reductions. A direct participation of the private sector through the distribution of credits to entities in the sector faces several challenges. Most

importantly, the issuance of credits depends on the performance of the sector *as a whole*. This implies that credits can not be issued to individual entities with an over-performance, as long as it is not ensured that all entities in the sector together meet the crediting baseline. Direct involvement of private entities would thus only be possible if installations which exceed the crediting baseline are obliged to provide credits for their excess emissions. Such an approach would rather resemble a domestic emissions trading scheme since the no-lose character of the SCM agreement cannot be passed through to the private entities.

### **A SCM requires a strong international regulatory agency**

The host country and the international community have different interests in a SCM. Host countries have a financial incentive to set the crediting baseline as high as possible, in order to generate more credits and associated revenue. The international community has an interest that the crediting baseline is set in an ambitious manner in order to increase the net benefits to the atmosphere.

Thus, a strong international institution should supervise and regulate the SCM. The ultimate supervision of the mechanism should be with the COP/MOP. The technical assessment of proposals for implementing the SCM or for issuing credits should be delegated to a *regulatory agency* which draws upon the necessary technical expertise. Key issues are sufficient financial resources for the agency, relevant regulatory experience and knowledge, sufficient qualified full-time staff and the necessary immunity of the staff.

### **Scope and coverage of the mechanism**

Generally, a SCM should be established on national level. Usually, data necessary to establish the crediting baseline and to monitor emissions is more easily accessible at this level. A national implementation may be also easier to administrate and avoids carbon leakage within the country. In some cases, it may be appropriate to implement a SCM at regional level (e.g. in the case of several electricity grids within a country) or at supranational level (e.g. in the case of an electricity grid covering several countries).

A proper definition of the covered sector is another important issue. For each installation, activity or emission source it should be unambiguously defined whether it is covered under the sector. A definition could be based on technical features (e.g. type of technology used), the site, the company or a combination of such criteria. A de-minimis rule could exclude small installations below a certain threshold. Such a threshold should refer to capacity rather than to performance in order to avoid adverse incentives. The definition should ensure that double counting of emission reductions is avoided.

### **Length of the crediting period**

With regard to the length of crediting period there is one fundamental trade-off: from an investor's perspective it is important to have a long planning horizon. On the other hand, regulators may prefer shorter periods, specifically when experiences with the new mechanism are not yet available and in order to facilitate a transition to other instruments (e.g. emissions trading). A reasonable balance needs to be struck between these objectives.



The crediting period could either be a certain number of years (as under the CDM) or be directly linked to commitment periods (as under JI). Linking the length to commitment periods is recommended as this makes a future transition to other instruments easier.

### **Monitoring, issuance and accounting**

All necessary data to monitor GHG emissions and other relevant data in the sector should be monitored and documented in monitoring reports. As under the CDM and for GHG inventories, it is recommended that monitoring reports be reviewed by an independent institution for verification purposes. After resolution of any questions, the international body supervising the mechanism could issue the credits into a registry. For this purpose, a monitoring plan should be developed ex-ante and submitted along with the proposal for a SCM. The monitoring plan should specify the institutional arrangements made for data collections, the type of data that will be collected, the procedures for data collection, the measurement methods and quality assurance and quality control measures applied, and the equations needed to calculate emissions and indexes used. It is recommended that reporting of all data and issuance of credits occurs on an annual basis, using calendar years, as most national and international statistics provide annual data for calendar years.

An important question is over which period compliance should be assessed. An assessment on an annual basis would imply that credits are issued for those years in which actual emissions are below the crediting baseline and no compensation is required for any years in which the actual emissions are above the baseline. An assessment for the entire crediting period would imply that credits are only issued for the net difference between actual emissions and the crediting baseline over the entire crediting period. This means that the host country would need to compensate for increases of actual emissions above the crediting baseline but only to the extent that credits have already been issued earlier. Another option could be that any increase of emissions above the crediting baseline does not need to be compensated immediately but is subtracted from the amount of emission reductions achieved in the subsequent year(s).

The latter approach is already applied under the CDM and may be reasonably balanced. It does not involve any risk for the host country that credits have to be returned to the registry in order to compensate for non-compliance in a certain year. And it provides a compensation mechanism if emissions exceed the baseline in early years of the crediting period. However, it does not provide a guarantee that over-issuance in the past is always compensated.

### **The integration of a SCM in the global carbon market**

A SCM would most likely be only one instrument in the global carbon market. Binding caps on GHG emissions are the backbone of a global carbon market. Any crediting mechanism only provides incentives to reduce emissions if there is a reasonable global carbon price. A reasonable price is only ensured, if the demand for mitigating emissions (i.e. the mitigation required to meet the national or sectoral caps) is larger than the supply of credits and allowances in the market. If the supply exceeds the demand, carbon prices can fall close to zero, as observed in the first phase of the EU ETS.

Ensuring a reasonable balance in the global carbon market is therefore important to provide incentives for developing countries to reduce emissions.

This is particularly challenging in the case of a SCM for which the credit supply is very uncertain. Firstly, it is not clear how many countries and sector will use the mechanism. Secondly, the ambition of the crediting baselines will impact considerably the supply of credits. And thirdly, even with an agreement on the countries, sectors and crediting baselines, it is uncertain whether the countries will meet the crediting baselines and, if they do so, to what extent they will be able to lower their emissions below the crediting baseline. Thus, whatever is decided in a new climate treaty, considerable uncertainty will remain with regard to the actual supply of credits. Therefore, some safeguards should be included in a new climate treaty in order to avoid a collapse of the carbon market due to an oversupply of credits.

Towards this end, several approaches can be explored. Introducing a cap on the issuance of credits from a SCM could be one way. The cap could be introduced either on a global level or be allocated to countries. The overall level of the cap could be derived from the overall efforts of all industrialised countries. The cap could, for example, be set at 50% of the overall reduction effort of all industrialised countries. This would ensure that credits issued from a SCM are only a proportion of the global demand for credits. The continuation of the CDM and any other new carbon market instruments would need to be considered in setting the cap. Other approaches to ensure a reasonable balance could include, for example, a review clause or the establishment of a lower price floor where a regulatory agency would purchase allowances or credits from the market if the supply exceeds the demand.

For more information, please contact:

Steve Sawyer,

Global Wind Energy Council, Secretary General.

Email: [steve.sawyer@gwec.net](mailto:steve.sawyer@gwec.net);

Tel: +32-2-400-1030

Fax : +32-2-546-1944