CONTINUOUS MONITORING SYSTEM

Methodological Principles to Schedule the Life Cycle of the Individual Projects included in API

1. Background

In the last GTE meeting on the API Continuous Monitoring System (CMS) (Lima, Peru, September 26 and 27, 2012), there emerged several issues hindering the fulfillment of the task commissioned to the governments concerning the schedule of the life cycle of the individual projects included in API on the basis of the methodology initially proposed. However, as a result of the exchange of ideas that occurred during and after the meeting, considerable progress was made, particularly in relation to the objectives to be attained and the different possible ways of overcoming some of the obstacles. In particular, the following can be mentioned:

a) It is necessary to respect the fundamental objective of the API CMS, i.e. to record the progress of the projects from a regional perspective. This will relieve officials from getting into much detail.

b) In some cases, the task grows more difficult due to the complexity of a specific project; hence, a critical factor is its definition, as it was exemplified with several cases.

c) It was agreed to continue the practice of classifying the projects into four project life cycle stages, as agreed by the governments in 2008, namely profiling, pre-execution, execution and completion.

Finally, it was also agreed that the CCT, in consultation with the COSIPLAN Member States, would polish up its initial proposal concerning the projects life cycle schedule in order to consider all the aspects above. The proposal should define, as accurately as possible, their scope of content.

2. Refinement of the Initial Proposal

Based on the above-mentioned considerations, there follows a proposal intended to refine the methodology for scheduling the life cycle of the individual projects included in API.

a) Objective of the Schedule

As it is widely known, the objectives pursued by a monitoring system can be of a very diverse nature, and this has a direct bearing on the system design. In the specific case of the API projects, the goal is to produce an instrument capable of recording the progress made by the individual projects included in

the agenda from a regional perspective and in successive periods (every half-year or year). At a later stage, the system is also expected to contribute —again from a regional perspective— to monitor the crucial stages of the structured projects and to timely identify any restrictions affecting these projects that require special efforts by the governments involved to be overcome.

In this regard, the scheduling system differs from others frequently used in the management of project banks. The purpose of gaining a broad view in this case is a highly demanding task in terms of the comparability of the projects (across sectors and countries), but, on the other hand, there is no need for much detail. In fact, it would be very difficult (and somehow irrelevant) to keep an excessive number of details without giving up comparability.

b) Recording of Project Progress

As already said, the initial proposal established the continuation of the four stages of a project life cycle agreed by the governments in 2008. With regard to the first one, i.e. profiling, it should be mentioned that the second API project selection criterion specifies that a project should, at least, be at this stage to be included in the agenda (otherwise, it cannot be incorporated into it). This means that there is enough background information to assess the suitability and technical and economic feasibility of implementing the project idea. In this regard, this is the starting point in the schedule of an API individual project life cycle (0% progress).

As to the fourth stage, its concept and duration are clear and relatively short. In general, infrastructure projects present a gap between, on the one hand, the date of completion of the physical works or actions required for the project execution, and, on the other, the infrastructure start-up date. This is usually because the completed works have to be handed over to the relevant authorities first, who then decide when they are to be opened and functioning. For this reason, it is proposed to reserve a 5% of the total schedule to provide for this time gap between the end of the execution stage (95%) and the completion of the project (100%).

The other two stages —pre-execution and execution— are the ones that take up most of the time in the project life cycle —from 0 to 95%. In the huge majority of the cases, covering both stages from one end to the other will demand a minimum of 10 years (3 to 5 years for the pre-execution stage, and 6 to 10 for the execution stage). Therefore, it is necessary to subdivide them in order to evaluate the progress made by the projects; otherwise, the projects would seem “frozen” for many years. In other words, regardless of the advances that may take place, it would be impossible to “identify” them as there would not be any intermediate phase recorded. Hence, the principle of subdivision of these two stages is an essential component in the project schedule proposed — in fact, it should be deemed unavoidable and undisputable if the CMS objective

is to be attained. The table below presents a subdivision proposal, which will be discussed in the document further on.

PROJECT STAGES AND SUB-STAGES										
PROFLING 0%	PRE-EXECUTION 30%					EXECUTION 65%				COMPLETED 5%
0% Initial status	6% Financing of studies	12% Studies underway	18% Studies completed	24% Permits granted	30% Financing of works	50% First quarter of works	65% Second quarter of works	80% Third quarter of works	95% Fourth quarter of works	100% Works handed over
SCHEDULE, PROGRESS, AND DEVIATIONS										
	Completion MM/YY	Completion MM/YY	Completion MM/YY	Completion MM/YY	Completion MM/YY	Completion MM/YY	Completion MM/YY	Completion MM/YY	Completion MM/YY	Completion MM/YY

Another issue is to determine how or in what manner this principle will be uniformly applied to such a heterogeneous set of projects that involve a wide range of infrastructure sectors, countries, and investment methods. This is the challenge ahead, which is not simple at all and is very likely to call for flexibility and some degree of compromise regarding the various alternatives possible, without overlooking the fundamental objective.

As it came up in the discussion, the subdivision of the execution stage appears to be simpler, since several options can be considered. Thus, the execution stage (which ranges from 30 to 95% of the schedule) could be broken down into, for example, four sub-stages, as shown in the table above. To establish the end of each stage, the investment amounts required, the time frames involved, or the significant milestones in the progress of the works might be used. In this regard, if four sub-stages were adopted, from the beginning of the project execution (30% of the total schedule) onward, their successive dates of completion would show that the project concerned has progressed 50%, 65%, 80%, and 95%.

Subdividing the pre-execution stage is, apparently, a more complex though equally necessary task. Its complexity lies in the fact that it usually comprises activities of a different nature, which can additionally be undertaken in different ways and can be sequential, simultaneous, or overlapping. The pre-execution stage normally involves studies (pre-feasibility, feasibility and investment), permits and/or institutional formalities of various kinds (environmental, jurisdictional and others), and resource mobilization from various sources to finance the works and other actions at the execution stage. The problem lies in that variability among projects, sectors, and countries can be very large. Therefore, this proposal suggests a few methods to approach cases that are representative of this complexity. By way of an example, the pre-execution stage will be assumed to be broken down into five segments carrying an equal weighting (6%), thus making it possible to record the consecutive progress of the project at 6%, 12%, 18%, 24% and 30%. This last milestone (30%) will be supposed to mark the beginning of the execution stage and, therefore, the end

of the pre-execution stage. In other words, the pre-execution stage, ranging from 0 to 30% of the project life cycle schedule, is divisible into five equally weighted sub-stages.

i) First Subdivision: “Financing of Studies”

Originally, the second API project selection criterion established the requirement that feasibility studies should have been carried out for all projects in order to include only projects at an advanced preparation stage and having good finance and execution prospects vis-à-vis the implementation time frame established for the Agenda (2012-2022). Additionally, the purpose was that these studies would provide accurate information about the project resources and schedule (i.e. the present task). However, the countries decided to make this criterion more flexible and agreed to incorporate projects with a completed profiling study and budget resources allocated to conduct the pre-execution studies.

On the other hand, the level of the pre-execution studies required varies depending on the project execution method, the investment amount, and the financial source involved. For example, in the case of project execution undertaken directly by the public sector, all pre-execution study levels usually fall together in one, whereas if the funds are provided by international agencies, the three levels of studies are normally required at different stages of the established process as a condition for granting the loans. Different forms of public-private partnerships may also demand different levels of study, may establish a different time for conducting them, and may appoint different parties to be in charge.

Proposal for Recording Project Progress No. 1

In general, this first pre-execution sub-stage will be considered to be completed when the financial resources are actually available and all the institutional arrangements (e.g. award by tender) necessary to conduct the studies have been made. In particular, the processes required to carry out the most advanced studies for the execution of the project should have been completed. For example, if a project demands pre-feasibility, feasibility and investment studies, this sub-stage will be deemed completed only when the investment study has been done, regardless of the previous levels. If, instead, only a feasibility study were enough to execute a given project, the sub-stage will be deemed completed when the pre-feasibility and feasibility studies have been conducted.

ii) Second Subdivision: “Studies Underway”

As already stated, three pre-execution studies are considered, namely pre-feasibility, feasibility, and investment. Depending on various factors, each

project may require different study levels before passing on to the execution stage. Given the objectives of this system, it is not necessary to distinguish the different levels of the pre-execution studies but only the fact of whether the level required is underway or has been completed.

Proposal for Recording Project Progress No. 2

Studies will be considered to be underway when any pre-execution study has been launched, and will be recorded as such until completion of the study representing the level required by the project concerned to move to the "completed studies" sub-stage. Of course, a project that needs to go through the three levels will remain at this second sub-stage for a period longer than that of another project that needs to complete fewer levels of study. This is quite reasonable since what matters is to record the time when the studies required by the project to move to the "studies completed" sub-stage are finished.

iii) Third Subdivision: "Studies Completed"

Once finished, the studies are usually subject to approval by a relevant authority for them to be considered completed. In this third sub-stage, the criteria applied are similar to the ones previously used. What truly matters is the level of study required in each case to pass on to the execution stage. Again, it seems to be outside the scope of the system to record the approval of each level of all the theoretically possible studies.

Proposal for Recording Project Progress No. 3

Studies will be deemed to be completed upon approval of the study representing the highest level required by the project concerned to move to the execution stage. The completion of the studies of the previous levels will not be recorded in the system, and such studies will remain at the "studies underway" sub-stage.

iv) Fourth Subdivision: "Permits Granted"

Again, what matters is to record the time when the total tasks of this sub-stage have been finished. On the one hand, the permits to be obtained and/or the formalities to be carried out in a given project may be of various types, involve different requirements, and impose different deadlines; on the other hand, submitting the background information required for a license to be granted may demand some degree of interaction with the studies, as is the case of environmental permits.

Proposal for Recording Project Progress No. 4

This sub-stage will be deemed completed only when all permits have been granted and/or all the formalities required by the project to move to the

execution stage have been carried out. In other words, no partial completion of this sub-stage will be recorded. This is reasonable, since what matters is to mark the time in which the conditions are ready —i.e. the necessary authorizations have been obtained— for the project to move to the execution stage. In those cases in which interaction with the studies stage is very strong, both sub-stages may be consolidated in order to record, in an extreme case, their simultaneous completion.

v) Fifth Subdivision: “Financing of Works”

This sub-stage involves raising the funds needed to carry out the works and actions scheduled in the project. Here again there may coexist many situations not always simple to record consistently. Thus, for instance, the funds may come from fiscal revenues, and this may range from financing guaranteed against any event (national investment plans or multi-annual plans) to funding exposed to the circumstances that may affect the annual fiscal budget. Funds may also derive from a public-private partnership arrangement, provided either by the private sector against future revenues of some sort or by a public subsidy. Finally, they may result from an international borrowing operation, which will usually require domestic matching funds. In any case, it is important to note that the completion of this sub-stage is another precondition for the project to pass on to its execution stage.

Proposal for Recording Project Progress No. 5

This sub-stage will be deemed completed when the project has been allocated the financial resources for executing the works and all the other actions scheduled. This relates only to the commitment to finance the entire project and does not necessarily involve that all the funds have been disbursed. Should there be any problems with the disbursements, the works and actions underway will feel the impact, the passage from one sub-stage of the execution phase to the next being thus slower. While this availability of financial resources may be a mere formality in some cases, in others it may require a considerable effort.

c) General Remarks

The only effective way to confirm the validity of the methodological principles described is by trying to apply them to a wide variety of projects across different sectors and countries. Based on the results, the scheduling methodology may be subject to further adjustments. Regardless of this, there are some issues that are bound to contribute to the success of the task.

i) A first and highly relevant issue is related to the concept and definition of the project. API involves 88 individual projects with very different degrees of

complexity: some are relatively simple while others are extremely complex. Therefore, in some cases it may be necessary to disaggregate some of the most complex individual projects in order to develop a more homogeneous universe of API individual projects. This would undoubtedly increase the number of individual projects, but the fact that there are structured projects would help keep the focus of API on a limited number of projects (31 to date). It is important to bear in mind that a considerable number of structured projects are currently made up of only one individual project, which clearly shows the feasibility of working on this issue.

ii) Another issue worth mentioning is related to the presence of "automatisms." This issue arouse at the pre-execution stage during past experiences in applying the original methodology. One case concerned the availability of funds to execute the works, because as the project was included in the multi-annual investment plan, the availability of funds was expected to be automatically certified in only 24 hours. A similar situation may take place in the countries in which the inclusion of a project in their development plans ensures the availability of funds. In many other cases, this sub-stage might not be so automatically completed and may demand efforts and paperwork. When completion of a sub-stage is automatic, the project will go through it in a very short time, i.e. it will go through two sub-stages in virtually the same period of time.

iii) The third issue concerns the simultaneous completion of the sub-stages, manifestly contrary to the concept of sequential or even parallel completion of the sub-stages that is implicit in the proposed methodology. Here, the discussion revolved around the idea that everything is carried out at the same time and, therefore, results cannot be derived one after the other. In principle, the extreme version of this idea seems difficult to accept, as it would require that all sub-stages commence at the same time and, also, take exactly the same period of time for completion. For example, it is hard to think that the required permits are likely to be obtained without having conducted some studies before; nor is it plausible that a project will be included in the budget without having established the amount required for its execution, an estimation that can be made only if a study is conducted. Furthermore, it does not appear to be reasonable to assume that the time demanded by all the sub-stages will be the same; for example, the granting of a license or permit may take longer if a legal action is initiated by one or more stakeholders, slowing down the entire process. In sum, it appears that, though some degree of simultaneity is recognized, it should almost always be possible to separate the duration of the sub-stages.

iv) A fourth issue is the possibility of always finding an escape route from a seemingly insolvable situation. For instance, if there is no way to avoid automatisms or the simultaneous occurrence of the processes inherent in each

pre-execution sub-stage, other milestones may be used to subdivide the stage. One possibility is to use an imaginary assumption of time frames as a basis for the subdivision. The ideal situation would be to break the pre-execution stage down into five sub-stages, not defined by the concepts discussed but by others more suited to the project concerned. This would be similar to the subdivisions used for the execution stage, and would enable the interpretation of the subdivision of the stage on the basis of other parameters but also the recording of the progress made by the projects.

v) Finally, a sensible balance between intellectual rigor and imagination is fundamental. On occasions, it is not possible to simply apply the methodology in a direct manner, but finding the “trick” for the specific case is necessary. It is then important to be flexible and take on a strong commitment. In these cases, it is difficult to offer a general recipe, but it is possible to provide some guidelines.

When difficulties are encountered in the application, the first point to bear in mind is what the objective of the CMS is and why the subdivision is necessary. With these two concepts in mind as guidelines, flexibility and some degree of compromise should be used. In most cases, there are no universal truths, and some looseness or laxity may be put to good use. This does not mean that “anything goes,” as this would distort the exercise. Therefore, both intellectual rigor and imagination should be combined under a clear perception of how and why this exercise is being done.