



PISA FOR DEVELOPMENT

CAPACITY NEEDS ANALYSIS:  
SENEGAL



# PISA

FOR DEVELOPMENT



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## PISA FOR DEVELOPMENT. CAPACITY NEEDS ANALYSIS: SENEGAL

### 1. Introduction and Background

PISA for Development is an initiative of the OECD and development partners that aims to identify how PISA can best support evidence-based policy making in emerging and developing economies – and contribute to the UN-led definition of global learning goals for the post-2015 agenda. In addition, the project will help to build country capacity in assessment, analysis and use of results for monitoring and improvement among participating countries.

The initial phase of the project in each participating country is the completion of a Capacity Needs Analysis (CNA). The benchmark for the CNA is the necessary capacity required in the context of the PISA for Development project, which is defined as:

- The ability of the individuals and institutions responsible for the project in each country to perform the necessary functions (as set out in the roles and responsibilities for NC and NPM), solve the likely problems that will arise during implementation and set and achieve project objectives in a sustainable manner.

Countries may desire future capacities for student assessment that go beyond this minimum requirement. Identification of additional needs should reflect the participating countries' aspiration, while respecting the feasibility of realising the additional needs within the context of PISA for Development's three year implementation cycle and required activities.

This document describes the Capacity Needs Analysis (CNA) framework for PISA for Development as well as the use of this framework in the Senegal context. The framework itself is derived from project requirements of the main OECD PISA implementation, which are outlined in the PISA National Project Manager (NPM) Manual (OECD, 2012a) and the NPM Roles and Responsibilities (OECD, 2012b), and the stated programme outputs of PISA for Development (OECD, 2013). The framework is structured according to three dimensions: 1) Enabling context, 2) Organisation, and 3) Individual. The framework is designed to assess the capacity of participating countries to achieve the five programme outputs of PISA for Development, which are:

1. enhanced contextual questionnaires and data-collection instruments;
2. enhanced descriptive power of cognitive assessments in reading, mathematics and science, at appropriate skill levels within the PISA cognitive framework;
3. an approach, including a methodology and analytical framework, for including out-of-school 15-year-olds in the assessments;
4. increased country capacity in assessment, analysis and use of results for monitoring and improvement; and
5. engagement with OECD, development partners and, prospectively, with other developing countries in order to identify peer-to-peer learning opportunities regarding participation in PISA



and its potential contribution to the UN-led discussions on the post-2015 framework education goal and targets.

The CNA is designed to generate an understanding of capacity assets and needs, which, in turn, will lead to the formulation of a Capacity Building Plan (CBP). The framework utilises elements of the SABER-Student Assessment questionnaires developed by the World Bank (Clarke, 2012) as well as the PISA technical standards as the benchmarks for assessing Senegal's assessment system and capacity for managing National and International Large-Scale Assessments. The standardised data obtained from applying the framework is incorporated into this CNA and will also be used to assist in identifying indicators, baselines, and targets for improvement in the context of the CBP. The tool used to enter data into the framework is available online at: [www.polymetrika.org/PISAD/Home/DataEntry](http://www.polymetrika.org/PISAD/Home/DataEntry).

The needs analysis was completed in Senegal during the first six months of 2014 through consultations led by the *Institut National d'Études et d'Action pour le Développement de l'Éducation* (INEADE), which is also the National Centre (NC) responsible for implementing PISA for Development in Senegal. The process involved a variety of stakeholders, primarily drawn from the K-12 sector in Education but also including Development Partners, Higher Education, and the Central Statistics Office (CSO).

PISA for Development is technically complex, operationally demanding and statistically advanced. Overall, Senegal has a solid foundational capacity for implementing the international assessment PISA for Development. Senegal conducts both national and international assessments on a regular basis. A sample of children aged 6-18 is assessed using a household survey by a non-government organisation. The capacity building plan will focus on PISA components that will allow Senegal to benefit from international benchmarking and from evidence on student performance derived from multivariate analyses, while also gaining capacity and competencies to raise the quality of its own national assessments through the use of item response theory (IRT) methodology, rigorous international standards of implementation and increased analysis to provide explanations for the results.

The structure of this report is as follows: it begins with a description of the needs analysis methodology, Section 2, together with a presentation of the needs analysis framework. Section 3 summarises the needs analysis with respect to the five PISA for Development programme outputs, the PISA technical standards and the SABER benchmarks. Section 4 describes the capacity building priorities that arise from analysis of the main assessment dimensions. The next steps in the project preparation process for Senegal are outlined in Section 5. The detailed capacity needs analysis is presented at Annex A and the Terms of Reference for the capacity needs analysis are included at Annex B. A brief note on INEADE and the details of Senegal's PISA team are included at Annex C.

## 2. Methodology

The development and application of the CNA framework to Senegal followed three distinct phases. The first phase involved the analysis of primary documents in order to develop an initial set of assessment criteria and preliminary data for the assessment framework together with a map of key stakeholders for interviews. The second phase involved the piloting of the initial assessment framework in the Senegal context and the collection of data for the assessment, mainly through interviews and documentary analysis. The final phase consisted of refinement and extension of the analysis framework and drafting of the report with a view to facilitating the development of capacity building plans. At each stage the findings of the analysis were shared with the key stakeholders to ensure a shared understanding of the approach and the results of the needs analysis. Findings were adjusted in the light of feedback and actions taken by the National Centre and the Ministry of Education in response to the initial analysis. The following sub-sections discuss each of these phases in greater detail.

### ***2.1. Structure of the Capacity Needs Analysis Framework***

The structure of the CNA framework is presented in this section. The framework consists (in the current working version) of 112 capacity elements that are required for successful implementation and stakeholder use of the PISA for Development products. Each element is defined by an overall description and descriptions of up to four levels of development (as applicable to each element), corresponding to the normative definitions described in section 2.2.

The organising structure of the framework is hierarchical, with each PISA for Development capacity element nested within the three main dimensions:

- The enabling environment, encompassing the legislative context and culture that facilitates the implementation, and the stakeholders who make use of the results.
- Organisation, encompassing the National Centre and any sub-national institutions that are directly involved in the implementation of the project.
- Individual, encompassing the staff of the National Centre and related organisations, in particular the National Project Manager(s) and his/her team.

Within each dimension, the elements are further organised according to the PISA for Development project requirement for which they are first needed. The PISA for Development requirements are an extension of the main PISA project milestones; they roughly follow a sequence beginning with establishing the National Centre and ending with dissemination of results to stakeholders to support decision making:

- Designation of NPM and establishment of National Centre.
- Compiling and confirming information on schools and students for the definition of the assessment population, stipulation distribution of languages in which assessment materials will need to be available, definition of criteria for stratification of school and student samples.
- Establishing security protocols for the National Centre and for national sub-contractors.
- Co-ordination of appropriate enhancements/adaptations/translations of instruments, manuals and guides, and field trial and verification process with international contractors.
- Deciding on the scale of national adaptations and number of assessment languages and co-ordination of appropriate enhancements/adaptations/translations of instruments, manuals and guides, and field trial and verification process with local translators, subject experts and international contractors.
- Organisation of plans for local printing of assessment materials and verification of print and paper quality in all languages that will be covered, while maintaining security.
- Communication and co-ordination with schools that will participate in the assessment.
- Communication and co-ordination with international contractors for the selection of the student samples in each school.

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- Recruitment and training of test administrators that do not have any direct relationship to the students that will be assessed and that are experienced and competent enough to carry out the testing sessions following the scripts, guidelines and procedures established.
- Planning of the quality assurance process so that Quality Monitors visit a sample of schools during testing sessions to observe and document quality of sessions.
- Planning of staffing and resources (technical and material) needed for coding of test booklets and contextual questionnaires and data management.
- Establishing a training plan with key staff of the NC to attend training sessions.
- Preparing and distributing testing materials to schools in a secure fashion, ensuring materials arrive safely and without suffering damage or alterations.
- Monitoring of school and student response rates, in co-ordination with international and national contractors, as appropriate.
- A sample of the student testing booklets that were coded will be submitted to the international contractor for an International Coder Review (ICR).
- The NPM, in consultation with educational authorities, the international contractors, the OECD Secretariat and relevant development partners, reviews the country's data base and the draft analysis plans for the national report.
- The NPM provides input and guidance with regards to the policy priorities that should help determine the content and analysis presented in the country report.
- NPM develops a national dissemination plan of their country's participation in PISA for Development and the relevant results from the pilot.
- Production of reporting documents and media.
- Dissemination of results to general audiences.
- Dissemination of results to key stakeholders.

This structure facilitates the prioritisation of different capacity elements throughout the programme implementation. Each capacity element is also indexed by the PISA for Development programme output for which it is most required.

In case further information is required, each element also refers to one or more primary documents (listed in section 2.3) to justify its inclusion in the framework.

### **2.2. Using the framework**

The intended use of the CNA framework is to facilitate the development of in-country capacity for implementation of PISA for Development. The framework provides a step-by-step approach to 1) evaluating of the current capacity for implementing PISA for Development, 2) setting development goals related to PISA for Development activities, and 3) planning for development activities. However, the

framework should not be treated as static; rather, it can be extended and refined based on information that emerges during the data collection process.

The rubric is reviewed with stakeholders to identify the current status of each element. The information may be collected using any appropriate needs analysis methodology such as questionnaire or interview. The completed rubric should also include a plain-language justification for each assigned rating. Once completed, the ratings and justifications, along with a narrative summary, are reviewed by key stakeholders. During the data collection or review process, if there are any new requirements identified, they may be added to the framework. If a new element is added, it is indexed by the structure defined in section 3.1, and the textual descriptions of the levels should follow the normative descriptions in section 2.2.

Preliminary target capacity levels are identified for each element and basic information for planning capacity building (defined in section 3.4) are completed along with the target ratings. The responsibility for developing specific capacity elements may be assigned to different resources, along with allocation of person-time, money and expected start/end dates. This information is used to develop the capacity building plan and prioritise the different capacity building goals.

### ***2.3. Primary Document Analysis***

The development and implementation of the CNA framework built on four primary documents:

- PISA Technical Standards. This document details the quality standards required for successful participation in PISA. For the purposes of the CNA framework, these quality standards are also assumed to apply to the PISA for Development context.
- PISA for Development document. This document outlines the broad goals of PISA for development, as described in Section 1.
- PISA National Project Manager (NPM) Manual. This document outlines the sequence of activities, as well as describes the recommended resources required for PISA implementation.
- SABER – Student Assessment (SABER-SA). The SABER framework describes the broader context of student assessment in a country. In particular, the CNA framework development focused on large scale assessments, particularly national and international assessments. These documents augmented the PISA-based documents by expanding on the requirements for participation to examine the broader enabling context. This dimension includes issues such as programme sustainability and the social, cultural and economic climates that will be necessary for meaningful use of the PISA results. The SABER framework uses evaluation rubrics that classify different elements of a county’s assessment system as either: Latent, Emerging, Established or Advanced. The different levels characterise the degree to which each element can support an effective assessment system, with “Established” representing the minimum level required to sustain an assessment system.

The first stage of analysis examined each of these documents from the dimensions of the enabling context, organisation and individual to identify the requisite elements of each dimension that are necessary to produce the PISA for Development programme outputs. Each element in the framework describes a salient characteristic in the country’s capacity that may be addressed with a targeted capacity building response; although the development of a single element sometimes required several capacity building activities, the activities are similar enough that they draw from similar human or physical resources and affect the same group of country-level stakeholders.

For each of these preliminary programme elements, development levels were defined by following the rubric approach established by the SABER instruments. Using a priori assumptions about the key features likely to be found at the four SABER levels, plain language descriptions were defined for each level (as applicable) for each programme element. Completing the rubric involves interviewing stakeholders to collect information about each rubric element, then, for each element, identifying the appropriate development level and providing a justification for the rating.

#### 2.4. Normative definitions

To facilitate the creation of textual descriptions for the different levels of each element of the framework, normative definitions were developed for the three dimensions. As new elements were identified and included in the framework, these normative descriptions guided the textual definitions for each level of the new element. For some elements, one or more of these levels did not apply; in these cases, the level remained undefined, as in the original SABER rubrics.

**Table 1. Enabling Environment ratings: normative definitions used for each element**

Latent	There is no environmental support or there are environmental obstacles that deter programme implementation
Emerging	There are political, economic or social structures in place that may be adapted to facilitate implementation
Established	Political, social or economic structures exist that can support implementation
Advanced	Political, social or economic structures are currently providing support to similar activities

**Table 2. Organisational rating: normative definitions used for each element**

Latent	There is no capacity to assume this role
Emerging	Some capacity exists but it is not institutionalised in a coherent administrative structure
Established	Some capacity exists within a coherent administrative structure, but may lack availability or technical skills to assume responsibilities
Advanced	Capacity is institutionalised and has sufficient resources to assume the responsibilities without developing additional capacity

**Table 3. Individual ratings: normative definitions used for each element**

Latent	Individuals do not have the skills and/or are resistant to developing requisite skills
Emerging	Individuals have foundational knowledge or personal attributes that will enable them to acquire requisite skills or attributes
Established	Individuals have sufficient knowledge, interest and aptitude to allow development of requisite skills or attributes with brief workplace training and/or independent training and practice
Advanced	Individuals already have the required skills or attributes

#### 2.5. Pilot Analysis

The preliminary CNA framework was employed in the country context through in-depth interviews with a variety of stakeholders related to the education system and the broader education sector. Particular

attention was paid to actors related to the production, use and interpretation of educational assessments. Interview subjects were selected using a snowball methodology, where a small sample of known interviewees participates in the recruitment of additional participants from among their expert colleagues. This methodology was required to respect local protocols for arranging and conducting meetings and reach experts within the education community. The entry point to the process was the PISA National Project Manager (and/or implementing agency lead staff). The scope then expanded to include educators, other assessment specialists, other government departments (i.e. higher education, statistics, trade/vocational), development partners, education researchers and leading voices in the national education discourse. Each participant was selected based on his or her knowledge or expertise in one or more of the three dimensions of the analysis. Many interviewees had extensive experience throughout the education sector in Senegal and were able to provide information relevant to elements of the CNA framework outside of their current professional roles.

Each interview subject was asked detailed questions regarding each of the elements in the preliminary CNA framework. The format for the interviews generally followed a basic structure:

- Subjects were provided details about PISA for Development and the purpose of the capacity needs analysis and the role of the interview in the development of the capacity needs analysis framework.
- For each element in the preliminary framework that was relevant to their interests and experience, subjects were asked to describe the current status of the element as well as any features or dependencies related to the element, such as who are the main actors responsible for each element and historical challenges accomplishing similar activities (during this segment, subjects were given the opportunity to review and comment on summaries of previously collected information).
- Subjects were asked to volunteer any additional information related to any of the three CNA dimensions.
- Subjects were asked to identify and, if necessary, introduce the interviewer to additional subjects with information or experience relevant to the topics raised in the interview.

## 2.6. Stakeholder consultations

Completion of the CNA was facilitated by PISA for Development National Project Manager, Mame Ibra Ba *Institut National d'Études et d'Action pour le Développement de l'Éducation* (INEADE). INEADE is the PISA for Development National Centre (NC), and Director Ba is the National Project Manager (NPM) managing the PISA for Development team that is based within the institution. The team consists of 10 people with multidisciplinary backgrounds including evaluator, psycho-sociologist and statistician. The World Bank Office and INEADE scheduled meetings for the consultant with key stakeholders and participants involved with international and student assessment areas related to the implementation of the PISA for Development project to facilitate the process. The consultation included interviews with (and the information previously provided by) the following stakeholders:

**Table 4. Key informants interviewed for completion of SABER questionnaires and the Capacity Needs Analysis Frame work**

Name of Key Informant	Title and Institution	Role and interest
Mame Ibra Ba	Director of INEADE and NPM for PISA for Development	Management of National and International student assessments and link to the work of the Ministry of

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Name of Key Informant	Title and Institution	Role and interest
		Education and the school system.
Massar Diop	Chief of Division, Division for Evaluation, INEADE and National Project Manager, PISA for Development	Implementation of National and International student assessments
Linda English	Human Development Specialist, Ex-World Bank, Dakar	Funder. World Bank provides National Budget support for Education, Funds for national ( <i>Partenariat pour l'Amélioration de la Lecture et des Mathématiques à l'Élementaire</i> [PALME]), and International student assessments (PASEC).
Dr. Lea Salmon	Sociologist, Quality of Education, <i>Laboratoire de Recherche sur la Transformation Economiques et Sociales</i> (LARTES)	Stakeholder. Research manager of Jangandoo, an ongoing national assessment of children 6 to 18 years, in school and out of school, funded by the Hewlett Foundation.
Dr. Latif Dramani	UFR, Social and Economic Sciences, Department of Economics and Management	Stakeholder. Analysis of data from Jangandoo and issues related to out of school children.
Alaya Ouarme	Expert statistician and Economist, Group for the co-ordination and follow up of economic policy, Ministry of Economy and Finance	Government. Ministry of Finance interest in human capital and the articulation between compulsory education and higher education.
Jacques Malpel	CONFEMEN, Co-ordinator, Programme on the Analysis of Education Systems (PASEC) international assessment	Stakeholder. CONFEMEN works with International student assessments in French. Next wave in 2014 with ten countries. ( <i>Agence française de développement</i> contributed to PASEC and PISA)
Baba Ousseynou Ly	Secretary General of the Ministry of Education	Runs the Ministry of Education. Responsible for all student assessments funded through the National Budget and for use of evidence by all Divisions in the Ministry.
Mariama Cisse,	Co-ordinator, PALME. Division of Elementary Education (DEE), Ministry of Education.	Government user of evidence. PALME is an innovative three year programme funded by the World Bank, where annually students in grades 2, 4 and 6 are assessed in reading and math at the beginning (baseline) and end of the school year (endline) to measure learning gain. Oldest students are 12 years old. Interest in successful transition to middle school and in PISA at 15 years old.
Abdoulaye Diatta	Director, Division of Teacher Training and Communication (DFC), Ministry of Education.	Government user of evidence. Special interest in using evidence for improving teacher education.
Lena Sene	Chief for Initial and Continuous Teacher Training, Division of Teacher Training and Communication (DFC), Ministry of Education.	Government user of evidence for initial and continuous teacher education. Also in comparison of PISA results with the national exam at the end of Middle school.
Badara Gueye	Chief for Communication, Division of Teacher Training and Communication (DFC), Ministry of Education.	Government user of evidence. Interest in dissemination of information on education quality.

Name of Key Informant	Title and Institution	Role and interest
Etienne Sarr (Yankhoba Sagna also attended)	Director, <i>Direction de l'administration générale et de l'équipement</i> (DAGE) (National Budget Management), Ministry of Education	Government stakeholder. Interest in all assessments where national funds are expended and in their efficiency and results.
Ibrahima Diome and team	<i>Conseiller éducation. Bureau d'Appui à la Coopération Canadienne</i> (BACDI)	Stakeholder. Canada funds the development of French textbooks to improve language learning. Interest in assessment of reading.
Catherine Berard,	Second Secretary, Development, <i>Bureau d'Appui à la Coopération Canadienne</i> (BACDI)	Stakeholder. Interest in evidence generated by student assessments in relation to education and development.
Khalil Diarra	Statistician, Division of Evaluation, INEADE	On national and international student assessment teams with responsibilities for statistical matters such as sampling, tests for reliability and analysis.
Babakar Fall	<i>Directeur général, Agence Nationale de Statistiques et Démographie</i>	Government. Interest in how 2013 census could be used as a frame for sampling out of school 15-year-olds.
Cheike Tidiane Ndiaye ,	<i>Directeur de Statistiques</i>	Conducted the sampling for Jangandoo, children aged 6 to 18 years in households, including in school and out-of-school children. Interest in sampling for out- of-school 15-year-olds for PISA for Development and ensuring national representativeness of the combined sample of in and out-of-school children.
Prof. Abdoulaye Diagne	Executive Director, <i>Consortium pour la Recherche Économique et Sociale</i> , (CRES)	Stakeholder. Interest in PISA data and internal and external capacity for research.
Awa Gueye Diagne	<i>Inspectrice de l'enseignement secondaire, spécialité sciences physiques. Inspection de l'Académie</i> (IA), Dakar.	Government user of evidence for practice. Works with teachers in Science and interested in PISA for Development Science domain.
Djibril Ndiaye Diouf	Director, <i>Division de la Planification et de la Réforme de l'Éducation</i> (DPRE), Ministry of Education.	Government focal point for using assessment evidence in 5 year planning process for education expenditures and reforms.
Ibrahima Ndour and Papa Sene	<i>Directeur and Sous-Directeur, Division de l'Éducation Moyenne et Secondaire</i> (DEMSG)	Government user of evidence. Responsible for quality of performance in middle and secondary school.
Abdoulaye Djiby Tall	<i>Responsable curriculum, Division de l'Éducation Moyenne et Secondaire</i> (DEMSG)	Government user of evidence. Interest in Science and Math curricula in middle and secondary school and PISA assessment.
Omar Ba	<i>Responsable Évaluation, Division de l'Éducation Moyenne et Secondaire</i> (DEMSG)	Government user of evidence. Interest in PISA relative to performance in exam at completion of middle school.
Amadou Gueye Seye	<i>Chef de Division, Statistique, DPRE</i> , Ministry of Education	Responsible for annual survey of schools and the production of the annual data report on schools. Used as the sampling frame for most national and international student assessments.
Pape Sow	Education Team Leader, USAID.	Stakeholder. Was at DPRE when first National student assessment



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Name of Key Informant	Title and Institution	Role and interest
		was started. Convenes a committee of funders and partners in development.
Alassane Diawara	Manager, BILES (Bilingual Lycée d'Excellence pour la Science) private high school, Dakar.	Stakeholder. Interest in PISA science domain. Role of private schools (about 13%) in the school system and in the PISA sample.

Information from these stakeholders was also supplemented by analysis of the following documents and material:

- Senegal National Assessment Questionnaires
- Senegal National Assessment Tests in English Language and Mathematics

Information from high level stakeholders was collected during a meeting of the National Assessment Steering Committee, held at the Ministry of Education (Directorate of Planning) on February 5, 2014. The Committee is a senior-level body including members from all major stakeholders in the education sector, including Development partners. The PISA for Development project was included as an item on the meeting agenda. This meeting provided the opportunity to inform all senior-level stakeholders about the project and respond to initial views and questions.

### 2.7. Refinement and extension

During the third phase of the CNA framework development and implementation the data collected during the second phase was analysed in order to identify elements that had been missing from the preliminary framework and to refine definitions within the rubrics. By necessity, there was some overlap between the second and third phases as interview subjects were revisited for additional clarifications. If the review identified clearly distinct prerequisites for existing elements, additional elements were added to the framework.

With the additional details provided by the interview subjects for each element, the CNA framework was extended to accommodate data collection specifically related to the development of a capacity building plan. The extended information includes the following data fields for each element:

- The target level that Senegal wishes to build its current capacity to meet.
- Explanation about why the target level is advantageous within the Senegal system's broader goals.
- The programme resource or actor primarily responsible for fostering the capacity building of the element.
- The individual person(s) responsible for championing the capacity building (with contact information).
- Any prerequisites for the commencement of the specific capacity building activities with respect to the element.
- The estimated budget for the capacity building activities.

- The estimated person-days required for the capacity building activities.
- The expected start date for the capacity building activities.
- The expected end date for the capacity building activities.

### 3. Summary of the capacity needs analysis

This section summarises the results from the application of the capacity needs analysis in relation to the PISA for Development requirements overall and then to the five PISA for Development outputs. The completed capacity needs analysis framework in its entirety for Senegal is presented at Annex A. The evaluation of capacity also included national aspirations of Senegal to complement and enhance its capacity, capability and expertise to improve the ability and quality of national and school assessments as well as other international student assessments. The tool for exploring and modifying the framework, and facilitating the data entry and summarisation process, can be found at [www.polymetrika.org/PISAD/Home/DataEntryhttp://polymetrika.ca/PisaForDev/](http://www.polymetrika.org/PISAD/Home/DataEntryhttp://polymetrika.ca/PisaForDev/). The material in Annex A is a direct export from this web-based tool.

Senegal has considerable experience with conducting national assessments, since six waves (1994, 1995, 2004, 2008, 2010, 2012) of *Système National d'Évaluation de Rendement Scolaire* (SNERS) have been completed. The SNERS sample size of 7 200 students compares favourably with the PISA sample size. Senegal also participated twice (2007 and 2013) in the international *Programme d'analyse des systèmes éducatifs de la CONFEMEN* (PASEC), however the report for the latest round is not yet complete. These assessments were carried out by the Division of Evaluation of the *Institut National d'Étude et d'Action pour le Développement de l'Éducation* (INEADE), which will also implement PISA.

Senegal, by and large, meets the established category requirements for participation in PISA based on the application of the Capacity Needs Framework. In every domain only a fifth or less of the Technical Standard Requirements received ratings lower than the established level which could be rectified by capacity building (Table 2). Of the 19 Technical Standards Requirements that were below the Established level, most (11) of them were in the dimension of Enabling Environments. Of the 4 that were met at the Latent level, 3 of them were in the Enabling Environment dimension. This indicates that some procedural improvements can be made by INEADE and Senegal using models that are international best practice without specific training. In general, many needs were indicated by the more complex requirements for PISA and the more advanced technical capacities that are required, which would require capacity building.

**Table 5. Overall assessment of Senegal based on Capacity Needs Analysis Framework**

Framework domain	Established Level indication	Total requirements based on PISA Technical Standards	Latent	Emerging	Established	Advanced
Enabling environment	Political, social or economic structures exist that can support implementation of PISA for Development.	48	3	8	18*	19
Organisation	Some capacity exists within a coherent administrative structure, but may lack availability or technical skills to assume responsibilities.	36**	1	7	18*	9
Individual	Individuals have sufficient knowledge, interest and aptitude to allow development of requisite skills or attributes with brief workplace training and/or independent training and practice.	28	1	2	16*	9

\* Under the domain Enabling Environment, of the 18 Technical Standard Requirements that met the Established level, 6 of them note reservations in the justifications. Under the domain Organisation, of the 18 Technical Standard Requirements that met the Established level, 4 of them note reservations in the justifications. Under the domain Individual, of the 16 Technical Standard Requirements that met the Established level, 1 of them notes reservations in the justifications. Reservations indicate further improvements could be made within the Established category, which would help in the implementation of PISA.

\*\* One Technical Standard Requirement was not rated because an alternative was used that did not exactly meet the indicators but a comment was provided.

### 3.1. Enhanced contextual questionnaires and data-collection instruments

INEADE has long and broad experience with the design and implementation of traditional assessments. They have constructed cognitive instruments, contextual questionnaires, translated them from French to Wolof and conducted assessments on randomly selected children, based on a school sampling frame. For example, for the national assessment SNERS, data was collected from random sample of 7 200 children in a random sample of schools by about 200 experienced data collectors, mostly teachers. These data collectors were trained with role playing and simulations and were able to collect data in all regions in the space of a week with a high response rate. Experienced coders, mostly from INEADE, were also trained with the final instruments and a manual of detailed procedures. After coding a 10% sample is drawn to test for inter-rater reliability and tests are re-coded if there is more than 5% variance. Standard security measures were taken, where printed questionnaires and other confidential material were stored in locked storage in INEADE with access provided by the two managers who held the keys. Protocols and confidentiality agreements were signed by data collectors and coders.

A survey of schools is conducted annually to create an up to date school frame which is maintained by the Ministry of Education, *Direction de la Planification et de la Réforme de l'Éducation* (DPRE). Private, public and community schools are categorised by *Inspection d'académie* (IAs, regions) and *Inspection d'éducation et de la formation* (IEFs, districts) which are the administrative units in the decentralised education system. The number of children in each class is known along with their gender and age, but not their names.

INEADE is aware that PISA for Development will require not only sufficient staff but multidisciplinary staff and has set up a PISA for Development team of ten people mostly drawn from the Division of Evaluation and the Division of Studies and Curricula (See Annex C). The members of the team have worked with context questionnaire design but they will have to familiarise themselves with PISA

design and frameworks to interpret the results of analysis, particularly where indices are used. The context questionnaire will be a lot more complex because of the addition of children who are out-of-school and the needs for international comparison.

PISA will require a more complex set of protocols. Though the principles are understood, protocols on conflict of interest, confidentiality, data access, tests of reliability and pre-testing in Wolof and Arabic will have to be developed. These new protocols have to be prepared in three languages. This will be the first time that data will be collected in Arabic by INEADE.

Translation will be more demanding since Senegal has made the decision to implement PISA in three languages: French, Wolof and Arabic. This would mean that translators in Wolof and Arabic will have to be trained on the PISA frameworks and work on training and procedure manuals as well as the instruments. Models from PISA countries that use Arabic and French will be useful.

The national assessments are based on nested sampling. However, PISA sampling will be more complex because of the sample of in-school and out-of-school children. Furthermore, sampling frames will have to be provided to the international contractors for both of these. Sampling decisions will have to be made regarding stratification, for example, to be able to analyse at the level of *Inspection d'académie* (IA) which is the unit for policy and practice. The creation of sampling frames will require close collaboration with the Ministry of Education for the frame of children in public, private and community schools and with the *Agence Nationale de Statistique et Démographie* (ANSD) for children out of school.

Coding procedures will also have to be prepared in three languages. Training for test administrators and coders has to be delivered based on PISA requirements to ensure fidelity of coders in the three languages. Because of the complexity of PISA, coders in the three languages should be identified early for training in PISA frameworks, coding and inter-rater reliability procedures. Senegal may benefit from contact with PISA countries using French and Arabic.

### **3.2. Enhanced cognitive assessments**

The team at INEADE has experience developing cognitive instruments, notably for the national SNERS, for children in lower grades. They have also participated in the international assessment PASEC which also measured skills in cognitive domains. A pre- and post-test of *Partenariat pour l'Amélioration de la Lecture et des Mathématiques à l'École Élémentaire* (PALME), an assessment of reading and math in the lower grades has been conducted to measure learning gain. Traditional measures of difficulty of items have been used. They have compared results over time by using a desired threshold (bivariate), and have reported on the percentage of children who failed to meet it. They are familiar with reading components in French which have been used in the lower grades.

The Senegal PISA team will need a deep understanding of the PISA frameworks and its use in the development of instruments and the interpretation of results. They will also require training on IRT, use of multiple booklets, cognitive scales, levels based on achieved tasks, reading components, indices and plausible values in relation to PISA. This methodology will also need to be explained by the team to the Education ministry, administrators, teachers, researchers and stakeholders. This training will also enable them to apply IRT methodology to their national assessments.

Thus far, there has not been much media attention or communication for a broad group of audiences regarding assessment results. Senegal is keen that student performance should be measured to an international standard. INEADE would need a good communication plan to explain the complexities of PISA and the country's ranking and standing in the domains to a variety of audiences.

Senegal is aware that reform will require policies that will target poor performers, for which greater resolution will be required at the lower end of the international scale. The team at INEADE will have to develop a greater understanding of the scales and levels used in PISA themselves to be able to explain results to a wide range of audiences. They will also need to conduct multivariate analysis with a range of explanatory variables to support policy decision making choices.

### ***3.3. Including out-of-school 15-year-olds***

The Social and Economic Transformation Research Laboratory (LARTES) conducts a national assessment of literacy and mathematics of youth aged 6 to 18 in 10 000 households, funded by the Hewlett foundation. ANSD carried out the random sampling. Though INEADE was not involved, there is a precedent and a representative of LARTES will be invited to serve on the advisory committee for PISA.

Contact has been made with ANSD regarding the sampling of out-of-school children. The census of 2013 in Senegal collected information by age and their schooling information for people living in households, in collective households (prisons, daras, etc.) and the “floating population”. Discussions with *Agence Nationale de Statistiques et Démographie* (ANSD) showed that it is possible to sample 15-year-olds, exclude the children who are in formal schools (public, private and community), and conduct sampling among those out of school under specifications provided by the international contractor and INEADE. ANSD will also have to prepare details about exclusions (it may not be possible to find the “floating population” aged 15 after two years) and to adjust the population weight for non-response.

INEADE, as the agency created for national assessments has not had the need to work with partners but will now have to create structures to work with partners (protocol with ANSD) and a committee of stakeholders. It will also be important to develop a communication plan where one task will be to customise information and documentation for targeted audiences in order to inform them about PISA. This will be particularly important to inform households of children aged 15 of the data collection.

INEADE will require guidance from the international consortium to prepare the remit based on PISA requirements for ANSD to prepare a sample of out-of-school children and the requirements for the Ministry of Education to prepare the frame for the sample children in school. They would have to clearly delineate which schools can be considered “formal”, following the curriculum and which schools do not meet the definition. For example, census data includes information about children who have ever attended school, language of instruction and last class attended as well as if currently in school, categorised by type.

The development of manuals and procedures for out-of-school children will be a new venture but the experience with manuals for children in school will be at least partially transferable.

### ***3.4. Improve country capacity in assessment, analysis and use of results for monitoring and improvement***

The Government of Senegal signed the PISA participation agreement which provides some assurance of stability and future public funding availability. INEADE is working to develop a system of student assessment, positioning the PISA assessment at the end of formal schooling as a means to examine the yield of investment in education and the quality of education for further education and the labour force. This is an indication of the value of PISA relative to other assessments and to other policies, such as post-secondary education, science and technology and labour force competencies. PISA will provide evidence for indicators monitoring performance as well as for policy options.

There is some take up of results from assessments. SNERS is cited in government documents and has generated some policy discussions (e.g. grade repetition). Stake holders use published information. PASEC

had many recommendations and results were used in the five-year plan for education. However, channels for feeding evidence for policy need to be systematic and institutionalised.

In order to ensure wider use of results by other actors in education, INEADE has created a list of stakeholders and a plan for a system of committees in their Strategic Plan. The upcoming PISA launch will also alert stakeholders of the future availability of PISA data which could be used for their own planning and actions.

INEADE has experience preparing national reports with graphical presentations of analysis and narrative explanations for both SNERS and PASEC. These results are disseminated to Government departments and to IAs and IEFs. Furthermore, there is good channel to the Ministry since PISA NPM Director Ba attends the *Comité de concertation et coordination* of the Ministry of Education every Wednesday with other Directors. He has already begun to provide briefings regarding PISA.

INEADE, as the NC, will have to take administrative actions that are not routine. Thus far, funding (or assurance of funding) preceded the implementation of assessments. PISA requires a multi-year (rather than annual) budget based on a three-year cycle of international and national expenditures. The budget should cover all core activities from pre-assessment activities to dissemination and secondary research. Such budget development is complex because it is multi-year and must dovetail with the PISA timeline related international expenditures as well as national budget procedures. PISA funding must be included in the budget proposal each year in June to the Ministry of Education for inclusion in the National budget with the final budget allocation in December. Alternatively, the funding request must be submitted for donor funding, much of which is embedded in funding provided for larger projects to the Ministry. Payments to the OECD are due in March (which could require two payments in the first year). Budget for research and development has not traditionally been included as core activities and must be redressed. Some costs are specific to Senegal such as the costs for out-of-school sampling by ANSD, training, purchase of a server for the secure storage of data, etc. Senegal would also prefer to send two people to the PISA International steering, technical meetings and peer-to-peer training workshops which would require additional costs. If specific activities align with donor priorities, they may require separate proposals with varying dates of disbursement. Funding may be sought, for example, for the inclusion of Arabic for data collection. Successful budgeting and administrative preparedness will ease the way to future participation in PISA.

The PISA team consists of ten people with complementary expertise. Of these, PISA will be the primary responsibility for two and the others will work part time on PISA. So priorities need to be managed by the Director to ensure sufficient time for PISA. First time implementation may require more time. Relationship with the International Contractor has to be managed and deadlines for important products have to be met. The team also has to be up to speed on PISA frameworks and requirements as well as analytical skills through training and team work. The team should have systems in place for co-ordination and assignment of tasks for efficiency.

Senegal is ambitious in its plan to derive the best information possible regarding the competencies of the entire 15-year-old cohort. Since PISA will be implemented in three languages, translation must be carefully organised for protocols, manuals and instruments. PISA requirements such as the translation plan, double translation and the process for comparability across languages based on knowledge of PISA frameworks will require effort.

PISA is different in design, methodologically complex and more rigorous in implementation. Consideration is being given for the purchase of French translation software to translate PISA documents only available in English (e.g. Frameworks) in order to be fully familiar with PISA documents so that preparatory and targeted products can be properly formulated. As part of the communication strategy,

INEADE should develop targeted materials on PISA for different stages of implementation to actively inform and prepare those involved in PISA implementation as well those using the results. These could be posted on a website as well. To introduce and prepare for the launch of PISA, It plans to establish a national committee which meets regularly for sustained support and for the creation of channels of communication to a wider network. These channels should reach the Ministry of Education, stakeholders, schools, teachers and teacher initial and continuous training. PISA engagement events should include IAs, inspectors, schools, teachers and parent committees in schools. In order to prepare schools and teachers for PISA participation requires materials about PISA, sample questions and the type of feedback that could be provided to schools. Information should also target those working on pedagogy and curricula. If key audiences are well prepared to understand PISA, when results are released, the time between the availability of evidence and application can be reduced.

Though the PISA team has prepared reports for their national assessments, PISA will require better understanding of IRT concepts and methodology for implementation and interpretation. Competency upgrades in IRT, item and instrument design, analysis and interpretation will be necessary to gain the most out of PISA participation. Training in the use of multivariate analysis techniques will be essential for the preparation of the national report and contribution to the international report. Models of national reports, shell tables and diagrams will benefit the PISA team. Training in the development and use of indices would be necessary. In particular socio-economic status would be sensitive for Senegal and meaningful analysis would have to be conducted using the index.

To benefit fully from PISA, INEADE would have to develop a dissemination and media plan for publication of the results. The PISA team will have to successfully handle this new highly visible release; thus, orientation and advice for the team in this regard would be valuable. In addition to the national report, targeted products for various government departments would be important for improving future performance (e.g. Reading component results for the Department of Literacy; school administration and classroom climate for teacher training and in-service training). One of the stated objectives for SNERS was to provide “teachers, school administrators, policy makers and the public reliable and valid data on the learning of students” and therefore dissemination experience from PISA will be transferable to other national assessments.

In addition to preparing a national report, INEADE should engage in in-depth research itself, work with a network of external researchers and support the use of PISA data by other stakeholders. This is important to gain the full value of the investment in PISA. The use of PISA data is more technically demanding and the PISA team should be trained to use it and to be able to provide guidance and support to researchers. This would enable Senegal to contribute substantively to the international PISA conference as well. The quality of research will be improved by the use of multivariate techniques and international peer review.

Thus far, the link between assessments and policy reform has been weak. PISA is timely because Senegal is shifting from teaching based on objectives to teaching based on competence. Once PISA is integrated into the assessment system, it should be actively linked to the policy cycle of government and school administration to ensure results are used. This would enhance the current means used to engage government and the education system. Systematic provision of ministerial briefs should be regularised. Timeliness rather than a reactive or responsive stance would be more effective to meet the needs of stakeholders.

### ***3.5. Identify peer-to-peer learning opportunities***

The PISA team within the INEADE is eager to participate in any opportunities to learn and share with other countries and development partners. The Senegal NPM has attended all international workshops and

meetings thus far. They would prefer that two people attend out of a ten person PISA team. These activities receive strong support from the Ministry.

#### **4. Capacity Development Priorities:**

The Capacity Development Priorities for Senegal arising from the needs analysis are presented in the following sections under the three dimensions that provide the structure for the analysis: enabling environment; organisation; and individual. Though the primary objective of capacity development is the successful implementation of PISA for Development in Senegal, it is also the aim to develop wider capacity for the improvement of national assessments, as spin-off benefits where the project budget and schedules permit.

Overall, Senegal is well positioned to implement PISA for Development provided that it can be scheduled during the school year so that it does not conflict with the timing of other assessments. Much of the capacities gained through long experience (since 1981) with national and international assessments can be transferred to the implementation of PISA for Development.

##### ***4.1. Enabling environment***

###### *National infrastructure and processes for preparation, implementation and utilisation of results of PISA*

Participation in PISA is a major step for Senegal for several reasons: first, it is an assessment in middle school while most of the other assessments are in elementary school; second, it is an international survey that compares performance globally while PASEC compared results primarily with French speaking African countries and third, it is an assessment using advanced and up to date techniques.

PISA implementation requires the development of financial, human resource and technical infrastructure improvements that will increase the capacity of Senegal to draw the most out of PISA and its national assessments. When PISA is integrated into a coherent and cost effective system of assessments for Senegal it will ensure the sustainability of future participation in it. Senegal is moving to a forward budgeting system and it would be timely to develop a multi-year budget for the system of assessments so that there is a forecasted and stable source of funds.

The PISA budget is also multi-source, with money from public sources and donors. Donor contributions should be directed to specific purposes desired by the donors but also complement the overall goals of the assessment system. For example, a donor which has contributed in the past to assessments in a national language such as Wolof could also support the translation and implementation of PISA in Wolof. Donors also benefit from PISA results because of its contribution to indicators which are used for results based disbursement as well as for monitoring and planning investments in education. Therefore, the PISA budget should be detailed in terms of components, indicating the source of funds.

Stakeholder management serves three essential functions: support, synergy and complementarity for assessment; donation enhancement; and a direct channel for the use of assessment results by all agents of education. A national advisory committee that meets regularly to discuss updates, needs for evidence, releases and potential for secondary research would be valuable for PISA but also for the other assessments in the system.

Development of functional plans would facilitate PISA implementation. These would include: 1) plans for developing preparatory materials about PISA for schools, teachers, inspectors and principals and teacher training so that the results will be anticipated, absorbed and applied; 2) plans for PISA related products (e.g. number of products and timing in the academic year) and flow of results from PISA and the assessment system in relation to the policy cycle of government and the planning cycle (e.g. input to



curriculum planning and teacher training) of the education system; 3) research plans for research and policy products customised for users, departmental briefs and targeted products for schools, teachers, etc; (4) a key component of the Dissemination plan would be the development of policy briefs and ministerial and high level briefings at key points of the policy cycle. The plan should include active (not only passive on the website) dissemination of the international and national reports as well as policy relevant, targeted products, the modes and timing of dissemination and the key target audiences.

### **4.2. Organisation**

#### *Protocols, procedures and models essential for quality of the PISA and national assessments*

PISA has established quality standards related to implementation. Protocols for conflict of interest, confidentiality agreements and quality management of data collection that meet these standards should be used. Security of instruments, data storage and access to data will need to be improved. This would include the preparation and printing of instruments; enhancement of secure storage, particularly the purchase of a server for the secure storage of data; and protocols for access of data by bona fide researchers and process for using the data. Upgrading of computers, servers and access to internet is a necessity for participation in PISA but also for the well-functioning of an agency for national assessments.

Training and preparing of ancillary staff such as data collectors, monitors and coders is an integral part of the PISA process. In order to ensure quality and consistency in relation to PISA requirements, standard training manuals, coding guides and training modules should be developed in the languages of implementation. These should be used for the orientation and training of test administrators, monitors and coders.

Quality standards for PISA implementation must be met for inclusion of Senegal in the PISA results. These would cover tests of reliability/validity used in PISA, quality check for translation, fidelity of coding, pre-testing context and national language questionnaires, quality check of printed booklets, booklet assignment and student tracking forms, data submission, etc. Though these procedures were specifically developed for internationally standardised implementation of PISA, they would also raise the implementation of national assessments to the international standard.

The planning of human resources for PISA implementation covers the time required during the three years and the use of staff with the appropriate competencies for PISA related tasks. Though there are ten members on the PISA team, priorities have to be managed since most staff will also work on other projects.

A well-funded system should be launched for internal and external secondary research using PISA data followed by wide and targeted dissemination. A network of external researchers should be part of the capacity to mine the rich data in PISA and to provide solid results based on technically advanced research methods and peer review. This capacity will also improve the use of results from national assessments.

### **4.3. Individual**

#### *Technical competencies essential for successful implementation for PISA and enhancing national capacity for improving the quality of future assessments*

Technical competency on the use of PISA frameworks for instrument design and development, IRT and its implications for design including multiple booklets, item development, development of the PISA cognitive scale, levels of performance and plausible values, ranking, graphic presentations using confidence levels, percentiles, etc. should be achieved through training in French. These components could be migrated to other national assessments to improve their quality. Linkage items could be developed to link PISA to the other assessments in the system.

Analysis and interpretation of results: Multivariate analyses, use of indices, particularly the socio-economic status index, and reading component analysis in relation to performance are essential for full understanding of the performance results for Senegal.

INEADE is interested in developing a cadre of internal and external researchers with these sophisticated but generic technical competencies and suggests that they can issue a certificate when training in IRT, psychometry and multivariate analysis is completed

*PISA survey design, sampling and instruments relevant in the Senegal context*

In order to meet the requirements of PISA, the two samples (15-year-olds in and out-of-school) must be carefully worked out in relation to the sampling frames, stratification (*Inspections d'académie* [IAs] are the policy and practice units for education) and other parameters. The sample for the 15-year-old students in school will use the school data base held by the Ministry of Education but it will be the first time a frame will be developed by age. To draw the sample for children not in school, the team would have to work with the *Agence Nationale de Statistiques et Démographie* (ANSD) which will use the Kish method to sample households with 15-year-olds not in school and ensure that it complements the children in school to get a nationally representative sample.

INEADE plans to improve its capacity for item development and to create an item bank by age and grade. Item development and input to national options for the background questionnaire for children in and out-of-school will build future capacity. If the decision is made to collect data in three languages, the instruments must be validated and translated to ensure standardisation.

Attendance at PISA related meetings and international peer training sessions provide opportunities to learn from experts about PISA and from the experiences of peer countries. Any training should be cascaded to the rest of the team.

## **5. Next steps**

The use of the capacity needs analysis framework has unveiled areas of strength and areas for further development related to PISA for Development in Senegal. Based on this step, a capacity building plan will be developed in collaboration with Senegal to ensure that the appropriate methods of capacity building are chosen in order to increase the chances of successful implementation of PISA for Development and to reduce the risks of unnecessary difficulties. The components of capacity building will have to work synergistically and be appropriately scheduled and costed to be effective. The capacity building plan will also keep in mind, the needs and interests of Senegal for quality assessments to support educational reform for high student performance.

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## ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

The following Annex is a direct export of data from the PISA for Development CNA application. The structure of the information is hierarchical, nesting each PISA for Development needs analysis element within: 1) the three CNA dimensions (enabling environment, organisation, individual), 2) PISA for Development project requirements (the sequential operational requirements for implementation of PISA), and 3) the five PISA for Development programme outputs (enhanced questionnaires, enhanced assessments, out of school 15-year-olds, assessment capacity, and peer-to-peer learning). The original references for each CNA element are listed below the element description. The references describe the original source document and the numerical designation of the defining element. In documents where the elements are not enumerated, such as the NPM manual, the reference describes the relevant section heading. The rating for each element on the rubric is justified with reference to specific contextual details in Senegal.

### *CNA Dimension 1. Enabling Environment*

#### *Project Requirement 1. Designation of NPM and establishment of National Centre*

##### 1. Stability of National Large Scale Assessment (NLSA) programme

Programme output: Country capacity in assessment, analysis and use of results for policy making

Reference: SABER-SA-NLSA: EC1

Latent	Emerging	Established	Advanced
No NLSA exercise has taken place.	The NLSA has been operating on an irregular basis.	The NLSA is a stable programme that has been operating regularly.	

Justification: Six waves of the national assessment *Système National d'Évaluation de Rendement Scolaire* (SNERS) have been conducted successfully since 1994. SNERS was conducted in 1994, 1995, 2004, 2008, 2010, and 2012.

##### 2. Having regular funding for NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-NLSA: EC3

Latent	Emerging	Established	Advanced
There is no funding allocated to the NLSA.	There is irregular funding allocated to the NLSA	There is regular funding allocated to the NLSA	

Justification: Budget for SNERS is in the budget proposal submitted and in the INEADE budget from the national budget allocation for the organisation. Budget CFA 81 000 000 (USD 180 000) every two years. (World Bank provides budget support to the government).

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### 3. Adequacy of NLSA funding

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-NLSA: EC3

Latent	Emerging	Established	Advanced
	Funding covers some core NLSA activities: design, administration, analysis or reporting.	Funding covers all core NLSA activities: design, administration, analysis and reporting.	

Justification: With reservations. But no funds are provided for secondary research.

### 4. Relevance of NC expertise

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA: NLSA

Latent	Emerging	Established	Advanced
There is no staff allocated for running a NLSA.	The NLSA office is inadequately staffed to effectively carry out the assessment.	The NLSA office is adequately staffed to carry out the NLSA effectively, with minimal issues.	The NLSA office is adequately staffed to carry out the NLSA effectively, with no issues.

Justification: The Evaluation Division of 6 staff at INEADE carries out SNERS, with additional temporary staff (administration, coding, etc.) when necessary.

### 5. Experience in planning, organising and conducting large-scale surveys

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA: NLSA

Latent	Emerging	Established	Advanced
The country/system does not offer opportunities that prepare individuals for work on NLSA.		The country/system offers some opportunities to prepare individuals for work on the NLSA.	The country/system offers a wide range of opportunities to prepare individuals for work on the NLSA.

Justification: INEADE provides some technical training opportunities to staff, not directly tied to SNERS. Test administrators and supervisors are trained to participate in SNERS. Workshops on International Large Scale Assessment (ILSA) and related data base were offered

### 6. Experience in planning, organising and conducting international assessments

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA: ILSA

Latent	Emerging	Established	Advanced
The country/system has not participated in an ILSA in the last 10 years.		The country/system has participated in at least one ILSA in the last 10 years.	The country/system has participated in two or more ILSA in the last 10 years.

Justification: Senegal has participated in two rounds (2007 and 2014) of *Programme d'Analyse des Systèmes Éducatifs de la CONFEMEN* (PASEC). The report for the latest round is not complete. For PASEC, a national report will be prepared by the team in INEADE with guidance from the international expert group of CONFEMEN. The pre-test for *Enseignement de Langue Nationale en Afrique* (ELAN) has been completed and the test will follow.

#### 7. Having regular funding for ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: EC2

Latent	Emerging	Established	Advanced
There is no funding for participation in ILSA.	There is funding from loans or external donors.	There is regular funding allocated at discretion.	There is regular funding approved by law, decree or norm.

Justification: Funding for PASEC was a combination of government funding and donor funding. Funding for ELAN was received from *Organisation Internationale de la Francophonie*, Paris. PISA national budget is likely to include donor funding.

#### 8. Description: Adequacy of ILSA funding

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: EC2

Latent	Emerging	Established	Advanced
	Funding covers some core activities of the ILSA.	Funding covers all core activities of the ILSA.	

Justification: Funding for ELAN covered all core activities. It was received from Organisation Internationale de la Francophonie, Paris. Research is not included.

#### 9. Bureaucratic efficiency

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 19.1, PISA Technical Standards: Standard 1.1, PISA Technical Standards: Standard 7.1, PISA Technical Standards: Standard 14.1, PISA Technical

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Standards: Standard 14.2, PISA Technical Standards: Standard 15.1, PISA Technical Standards: Standard 15.2, PISA Technical Standards: Standard 15.3, PISA Technical Standards: Standard 15.4

Latent	Emerging	Established	Advanced
Stakeholders and the NC have no direct communication		Channels for communication involve unnecessary third parties	Communication channels allow direct institutional access between NC and stakeholders

Justification: With reservations. PISA NPM, Director Ba attends the *Comité de concertation et coordination* of the Ministry of Education every Wednesday with other Directors. Meetings with directors at the Ministry require a formal letter to the Ministry informing them of requested meetings. Meetings with non-government stakeholders are one at a time. However, the intention is to create a national PISA committee which would simplify communication.

#### 10. Efficiency of communication protocols

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 1.1, PISA Technical Standards: Standard 14.1, PISA Technical Standards: Standard 14.2, PISA Technical Standards: Standard 15.1, PISA Technical Standards: Standard 15.2, PISA Technical Standards: Standard 15.3, PISA Technical Standards: Standard 15.4, NPM Manual: Communication (NPM/NC responsibilities)

Latent	Emerging	Established	Advanced
The NPM is not able to engage directly or indirectly with key stakeholders	The NPM can engage stakeholders but only indirectly through higher management levels	The NPM can engage directly stakeholders but in a formal or subordinate role (i.e., with restricted exchange of communication)	The NPM can engage most stakeholders as a peer

Justification: Meetings tend to be formal. Communications are not regular but they can be transparent for items on the agenda. A PISA National Committee will help.

#### 11. Communication with stakeholders

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 19.1, PISA Technical Standards: Standard 1.1, PISA Technical Standards: Standard 7.1, PISA Technical Standards: Standard 14.1, PISA Technical Standards: Standard 14.2, PISA Technical Standards: Standard 15.1, PISA Technical Standards: Standard 15.2, PISA Technical Standards: Standard 15.3, PISA Technical Standards: Standard 15.4, NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
There is no regular communication between NC and stakeholders	The NC interacts with a network of contacts representing each stakeholder organisation	The NC provides regular updates or bulletins to stakeholders	The NC has regular meetings or accessible forums with stakeholders for two-way discussions

Justification: Mostly communication with government. PISA NPM and Director of INEADE can provide updates at *Comité de concertation et coordination*, Ministry of Education attended by all Divisions of the Ministry of Education. Currently INEADE interacts with government and non-government (including donors) stakeholders one at a time. The PISA National Committee is intended to have regular meetings and serve as a forum.

## 12. NLSA research and development funding

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-NLSA: EC3

Latent	Emerging	Established	Advanced
	Funding does not cover research and development activities	Funding covers some professional development activities	Funding covers research and development activities

Justification: Secondary research is not funded. Only development directly related to NLSA is funded as a core function.

## 13. Having strong organisational structures for NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-NLSA: EC4

Latent	Emerging	Established	Advanced
There is no NLSA office, ad hoc unit or team	The NLSA office is a temporary agency or group of people	The NLSA office is a permanent agency, institution, or unit	The NLSA office is an independently-funded and operating agency, institution, or unit

Justification: INEADE is an independent public agency created in 1981 responsible for educational assessment and research for the Government of Senegal. See Annex C.

## 14. Autonomy of NLSA structures

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-NLSA: EC4

Latent	Emerging	Established	Advanced
	Political considerations regularly hamper technical considerations	Political considerations sometimes hamper technical considerations	Political considerations never hamper technical considerations

Justification: Based on SNERS once the government has issued a formal note or decree (*arrêté*), there should be no issue. There are however, competing interests of stakeholders. The PISA National Committee can promote co-ordination.



## 32 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

### 15. Accountability of LSA structures

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA: NLSA

Latent	Emerging	Established	Advanced
	The NLSA office is not accountable to a clearly recognised body	The NLSA office is accountable to a clearly recognised body	

Justification: INEADE reports to the Ministry of Education.

### 16. ILSA research and development funding

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: EC2

Latent	Emerging	Established	Advanced
Funding does not cover research and development activities.		Funding covers some professional development activities.	Funding covers research and development activities.

Justification: Thus far, research and development activities of ILSA have not been funded. But they may be included in the budget proposals in the future.

*Project Requirement 2. Compiling and confirming information on schools and students for the definition of the assessment population*

### 17. Geography and climate obstacles

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA for Development Document

Latent	Emerging	Established	Advanced
Large segments of the population are inaccessible to data collectors	Quality of transportation networks deny access of data collectors to certain regions	Quality of transportation networks limits the ability to reach certain regions under certain weather conditions	All regions are accessible

Justification: Based on data collection for *Système National d'Évaluation de Rendement Scolaire* (SNERS), where data was collected from all regions in a week.

### 18. Security issues with data collection

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA for Development Document

Latent	Emerging	Established	Advanced
Lack of security prevents data collection for large segments of the population	Civil unrest makes certain regions inaccessible to data collectors	Civil unrest requires additional security to ensure the safety of personnel and integrity of data in certain regions	All regions are accessible

Justification: Senegal has a fairly stable government. The southern unrest in Casamance is calm enough to permit data collection.

#### 19. Effect of political climate on implementation

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA for Development Document

Latent	Emerging	Established	Advanced
Political conflict prevents project from proceeding	Political tensions introduce bureaucratic difficulties which reduce the ability of the NPM to reach consensus with stakeholders or meet timelines	Political climate does not adversely affect the project	All relevant political bodies (government and opposition) actively support the project

Justification: Based on six waves of data collection for Système National d'Évaluation de Rendement Scolaire (SNERS), the political climate has no impact on the project.

#### 20. Reliability of student attendance

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 1.10

Latent	Emerging	Established	Advanced
Student attendance is unreliable and/or not monitored	Student attendance may be monitored but is vulnerable to out-of-school factors (e.g. work, weather)	Student attendance is reliable but is not formally monitored with attendance records	Student attendance is reliable, monitored, and enforced with attendance policies

Justification: Schools monitor student attendance (*appel journalier*) but have no authority or incentives to keep students at school. But they can contact parents.

#### 21. Quality of school sample frame

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

## 34 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

Reference: PISA Technical Standards: Standard 1.6, PISA Technical Standards: Standard 9.3, PISA Technical Standards: Standard 16.1

Latent	Emerging	Established	Advanced
There is no EMIS or equivalent infrastructure to provide a school sampling frame	An EMIS is present but is not used or is not accessible for confidentiality or bureaucratic reasons	An EMIS exists and is accessible but is not updated regularly or the frame is inaccurate (missing schools or have schools that don't exist)	An EMIS is updated annually with an accurate frame

Justification: A survey of schools is conducted each year to capture new schools and to remove schools that are closed. It is maintained by the Ministry of Education, Direction de la Planification et de la Réforme de l'Éducation (DPRE). The system maintains the list of schools and the number of children and their ages but not their names. For instance, in 2014, there are 1,779 middle schools and 132,739 students aged 15 in these schools. Information on schools is organised according to IA (Inspection d'académie) region and IEF (Inspection de l'Éducation et de la Formation) District - there are 34 administrative units in respect of school education.

### 22. Level of detail in administrative student data

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 1.6, PISA Technical Standards: Standard 9.3, PISA Technical Standards: Standard 16.1

Latent	Emerging	Established	Advanced
No student data (e.g. grade, age) is available for individual schools	Student data (e.g. grade, age) is recorded in aggregate at the school level	Students data are recorded in central records that link student name and school name	Students have profiles and personal identification numbers that persist across grades and schools

Justification: The current system is accurate but has data on schools and the number of children in each class by sex and age. A donor funded pilot system using the software Planete collects more detailed data on 100 schools (about 5%), where the schools enter data on teachers and students. This system has the names of the children and date of birth. It is intended to cover the whole system when computers and internet are universally accessible in schools.

### 23. Scheduling conflicts due to local political activities

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA for Development Document

Latent	Emerging	Established	Advanced
Regional resources are not available due to conflicting or uncertain availability	Uncertainty over the timing of magnitude of political or civic events results in inability of individuals, institutions, or regions to commit to participating in PISA	Use of common resources (schools, teachers/ head teachers) causes scheduling conflicts with implementation of PISA in schools	Scheduled political or civic activities do not adversely affect the project

Justification: Have not done PISA yet. Operations are carefully managed for SNERS which is completed every two years. PISA implementation should proceed smoothly, if the planning and preparation is done well with Ias (Inspection d'académie) and schools. The Project Implementation plan is an important tool to manage scheduling of implementation.

#### 24. 15-year-old census

Programme output: Including out-of-school 15-year-olds

Reference: PISA for Development Document

Latent	Emerging	Established	Advanced
No information is available about out-of-school 15-year-olds	Information about out-of-school 15-year-olds is available from data sources updated with >5 year frequency	Information about out-of-school 15-year-olds is available from data sources updated with 2-5 year frequency	Information about out-of-school 15-year-olds is available from data sources updated annually

Justification: The census of 2013 in Senegal collected information by age for people living in households, in collective households (prisons, daras, etc) and the “floating population”. Discussions with *Agence Nationale de Statistiques et Démographie* (ANSD) showed that it is possible to sample 15-year-olds, exclude the children who are in formal schools (public, private and community), conduct sampling among those out of school, stratified by *Inspection d'académie* (the decentralised units of education).

#### 25. Location of 15-year-olds

Programme output: Including out-of-school 15-year-olds

Reference: PISA for Development Document

Latent	Emerging	Established	Advanced
No information is available about geographic location of 15-year-olds	Information about location of 15-year-olds is at regional levels (e.g. number of 15-year-olds in each province)	Information about location is at community or district levels (e.g. number of 15-year-olds in each community)	Information about location includes household addresses of 15-year-olds

Justification: See Standard 24. The *Agence Nationale de Statistiques et Démographie* (ANSD) conducted the sampling for Jangandoo, children aged 6 to 18 years in households, including children in and out of school. They are assured that sampling of 15-year-olds in households is possible.

## 36 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

### *Project Requirement 3. Stipulation of languages in which assessment materials will need to be available*

#### 26. Information on student language of instruction

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 2.1

Latent	Emerging	Established	Advanced
No student records are available	Student records are available but do not store dominant language of instruction	Student information records the dominant language of instruction	Student information records the language of instruction for each subject

Justification: School data has information on language of instruction. Middle school instruction is in French and Wolof is learned as the second national language. There are some religious schools that use both French and Arabic. A new initiative for schools in six native languages is relatively new and for elementary schools only.

#### 27. Information on school language of instruction

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 2.1

Latent	Emerging	Established	Advanced
There is no EMIS or equivalent system	School information is centrally stored but without language of instruction	School information contains predominant language of instruction	

Justification: School data identifies the medium of instruction. In middle school instruction is in French.

### *Project Requirement 4. Definition of criteria for stratification of school and student samples*

#### 28. Clear statement of purpose for participation in NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-NLSA: EC1

Latent	Emerging	Established	Advanced
There is no policy document pertaining to NLSA.	There is an informal or draft policy document that authorises the NLSA.	There is a formal policy document that authorises the NLSA.	

Justification: A decree (arrêté) of government launched SNERS in 1994. The Ministry of Education charged INEADE with conducting SNERS and listed a number of objectives. On this basis a proposal is presented for financing of SNERS every two years during the National Budget process.

### 29. Transparent policy for NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-NLSA: EC1

Latent	Emerging	Established	Advanced
	The policy document is not available to the public.	The policy document is available to the public.	

Justification: The *arrêté* is a legal document, not usually available to the public.

### 30. Clear statement of purpose for participation in ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: EC1

Latent	Emerging	Established	Advanced
There is no policy document that addresses participation in ILSA.	There is an informal or draft policy document that addresses participation in ILSA.	There is a formal policy document that addresses participation in ILSA.	

Justification: There was an official note charging INEADE with carrying out ELAN. Countries were invited to participate in PASEC and only those who met eligibility criteria were chosen.

### 31. Use of ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: AQ2

Latent	Emerging	Established	Advanced
If any, country/system-specific results and information from the ILSA are not used to inform decision making in the country/system.	Results from the ILSA are used in a limited way to inform decision making in the country/system.	Results from the ILSA are used in some ways to inform decision making in the country/system.	Results from the ILSA are used in a variety of ways to inform decision making in the country/system.

Justification: PASEC had many recommendations. Results were used in five year plan for education. No follow up evaluations were done so it is not clear how much it affected policy or reform.

## 38 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

### 32. Stakeholder use of LSA data

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 19.1

Latent	Emerging	Established	Advanced
No stakeholders use of LSA	Stakeholders reference reported average scores and 'passing' percentages from published LSA information	Stakeholders commission specialised reports or reference correlations and other specific information from LSA	Stakeholders actively analyse data for specific information

Justification: There is no programme of secondary research by internal or external researchers. Results from the national reports are cited. Indicators of impact are developed using PALME for four purposes: By the Ministry, Stakeholders, Schools and children with difficulty.

*Project Requirement 9. Communication and co-ordination with schools that will participate in the assessment*

### 33. Engagement of data collection agency or network with collection sites (e.g. schools)

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 1.6

Latent	Emerging	Established	Advanced
	The NC has contact information for individuals with access to school sites	The NC has intermittent administrative contact with schools or contact through previous LSA	The NC has regular contact with schools through professional development and/or previous LSA activities

Justification: There is regular contact with the *Inspection d'Académie* (IA, regional) and through them with schools for the national SNERS because the education system is decentralised.

### 34. Perceptions of external survey-based large-scale assessment (LSA) of lower-level stakeholders

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 1.10

Latent	Emerging	Established	Advanced
Stakeholders have no knowledge of external LSA or assume that LSA is used to evaluate specific school performance	Stakeholders understand LSA is not antagonistic but see it as an unnecessary disruption	Stakeholders recognise a clear policy impact effect from the results of LSA and the policies and practices affecting learning	Stakeholders recognise external uses of LSA information and make internal use of LSA results to inform policy and practice

Justification: With reservations. SNERS is cited in government documents and has generated some policy discussions (eg. grade repetition). But results not as widely read in the Ministry. IA works with schools using overall SNERS results. There is hardly any public discussion of the results.

*Project Requirement 14. Establishing a training plan with key staff of the NC to attend training sessions*

### 35. Funding for NPM/NC for international training and meetings

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: International participation

Latent	Emerging	Established	Advanced
No budget or time exists for international training.	Ad hoc funds are allocated, when available, to support participation in international training and meetings	Institutional participation is formally committed, with funding from a variety of sources	Dedicated funds are available for participation in international training and meetings

Justification: The PISA national budget is secured from different sources and includes attendance at international meetings. However, the plan is to prepare a PISA multi-year budget and to seek more funding for specific activities from government and donors (eg. mentoring by a PISA country, secondary research). The intention is to also to seek more stable funding for the future.

### 36. Availability of NPM/NC for international training and meetings

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: International participation

Latent	Emerging	Established	Advanced
Staff are prevented from participating in international activities due to restrictions on personal or professional travel	No time is allocated for international activities, and they are completely external to staff's institutional responsibilities	Participation in international activities is within the scope of institutional responsibilities, but in addition to regular responsibilities	Time is specifically allocated to participation in and preparation for international activities

Justification: Judging from participation in the *Programme d'analyse des systèmes éducatifs de la CONFEMEN (PASEC)*, time is allocated for international meetings. Senegal hopes to send two people to PISA meetings, which may be a bit more demanding. The number participating in training may depend on the topic. Senegal would like to create capacity and is hoping to organise training for the PISA team on some technical topics in Dakar in French.

### 37. Participation in previous international ILSA training

Programme output: Identify peer-to-peer learning opportunities regarding PISA participation with other countries and development partners

Reference: SABER-SA-ILSA: SA1



#### 40 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

Latent	Emerging	Established	Advanced
The ILSA team has not attended international workshops or meetings.	The ILSA team attended some international workshops or meetings.	The ILSA team attended all international workshops or meetings.	

Justification: The Senegal NPM has attended all international workshops and meetings thus far. They would prefer that two people attend out of the ten person PISA team.

*Project Requirement 25. NPM develops a national dissemination plan of their country's participation in PISA for Development and the relevant results from the pilot*

#### 38. Expectations for NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-NLSA: EC1

Latent	Emerging	Established	Advanced
There is no plan for NLSA activity.		There is a general understanding that the NLSA will take place.	There is a written NLSA plan for the coming years.

Justification: SNERS was conducted in 2008, 2010 and 2012 and will be conducted again in 2014.

#### 39. Having strong public engagement for NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-NLSA: EC2

Latent	Emerging	Established	Advanced
All stakeholder groups strongly oppose the NLSA.	Some stakeholder groups oppose the NLSA.	Most stakeholder groups support the NLSA.	All stakeholder groups support the NLSA.

Justification: Mostly supported by involved government stakeholders. No opposition from schools.

*Project Requirement 27. The NPM provides input and guidance with regards to the policy priorities that should help determine the content and analysis presented in the country report*

#### 40. Setting clear policies for ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: EC1

Latent	Emerging	Established	Advanced
	The policy document is not available to the public.	The policy document is available to the public.	

Justification: None of the policy documents, SNERS, ELAN or PASEC were made available to the public.

#### 41. Contributions to ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Justification: SABER-SA-ILSA: AQ

Latent	Emerging	Established	Advanced
The country/system has not contributed new knowledge on ILSA.			The country/system has contributed new knowledge on ILSA.

Justification: Yes, for PASEC.

#### 42. Dissemination of ILSA results

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: AQ2

Latent	Emerging	Established	Advanced
If any, country/system-specific results and information are not disseminated in the country/system.	Country/system-specific results and information are disseminated irregularly in the country/system.	Country/system-specific results and information are regularly disseminated in the country/system.	Country/system-specific results and information are regularly and widely disseminated in the country/system.

Justification: With reservations. Most dissemination is only at the time of release. The Minister is briefed and the report is distributed (and posted on the web), but not in a targeted or wide way.

#### 43. Feedback from ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: AQ2

Latent	Emerging	Established	Advanced
Products to provide feedback to schools and educators about the ILSA results are not made available.		Products to provide feedback to schools and educators about the ILSA results are sometimes made available.	Products to provide feedback to schools and educators about ILSA results are systematically made available.

Justification: Information from PASEC was provided to the IA at the regional level that deals with schools but mostly based on the report, rather than a school oriented product.

#### 44. Breadth of stakeholder engagement

## 42 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 19.1

Latent	Emerging	Established	Advanced
Only the K-12 sector is engaged in LSA	K-12, TEVET and University sectors are engaged in LSA	Multiple stakeholders representing public interests including education and non-education sectors are engaged	Multiple stakeholders are engaged including non-government or indirect educational stakeholders

Justification: The government policy priority was to focus on the lower grades. PISA would be the first time students in the higher grades are assessed. There are policies to improve science and technology participation in higher education.

### 45. Media coverage of ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: AQ2

Latent	Emerging	Established	Advanced
There is no media coverage of the ILSA results.	There is media coverage of the national averages and percentages from ILSA results.	There is national media coverage of the ILSA results beyond national averages/percentages that includes correlations and demographic comparisons.	There is national and local media coverage of detailed ILSA results.

Justification: Press covers results on the day of release. There can be press lunches, etc., but there is no real media plan.

### 46. Positive impact of ILSA on monitoring and improvement

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: AQ2

Latent	Emerging	Established	Advanced
It is not clear that decisions based on ILSA results have had a positive impact on students' achievement levels.		ILSA results have influenced decision-making intended to improve students' achievement levels.	Decisions based on the ILSA results have had a positive impact on students' achievement levels.

Justification: With reservations. The first PASEC report had many recommendations. The policy for science and technology could have links to these results. Two waves of PASEC were completed but far apart (2007, 2013), so it is difficult to see the impact.

## 47. Learning needs for non-academic outcomes

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

Reference: PISA for Development Document

Latent	Emerging	Established	Advanced
No attention is given in the education sector to non-academic skills		The trade/vocational training sector defines foundational skills for occupational training	A framework extends the K-12 curricula to adult competencies relevant to local contexts (including economy, citizenship, etc.)

Justification: With reservations. There is no framework extending to adult competencies but the curriculum includes civic education. A new module on Human rights (funded by the UN) is being developed with accompanying text book. Senegal is participating in 2014 in a four country (Gambia, Guinea-Bissau, Nigeria and Senegal) study on employability based on the competence of children in the penultimate year of school. Réseau Ouest et Centre Africain de Recherche en Education (ROCARE), Compétence des élèves de l'avant dernière année d'études des collèges (4e) au Sénégal.

*Project Requirement 32. Planning of the quality assurance process so that Quality Monitors visit a sample of schools during testing sessions to observe and document quality of sessions*

## 48. Monitoring of collection procedures

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 9.3

Latent	Emerging	Established	Advanced
	Institutions or individual stakeholders may nominate or exclude specific sites from monitoring	Monitored sites are selected randomly with ad hoc exclusions	Monitored sites are randomly sampled and the rationale for any exclusions from site monitoring is agreed upon prior to sampling

Justification: Advanced plus. Do not have exclusions for monitoring and all sites are monitored.

## Summary

Framework domain	Established Level indication	Total requirements based on PISA Technical Standards	Latent	Emerging	Established	Advanced
Enabling environment	Political, social or economic structures exist that can support implementation of PISA for Development.	48	3	8	18*	29

Notes: \* Under the domain Enabling Environment, of the 18 Technical Standard Requirements that met the Established level, 6 of them note reservations in the justifications. Reservations indicate further improvements could be made within the Established category, which would help in the implementation of PISA.

**CNA Dimension 2 Organisation***Project Requirement 1. Designation of NPM and establishment of National Centre*

## 49. National co-ordinator for ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: EC3

Latent	Emerging	Established	Advanced
There is no team or national/system co-ordinator to carry out the ILSA activities.	There is a team or national/system co-ordinator to carry out the ILSA activities.	There is a team and national/system co-ordinator to carry out the ILSA activities.	

Justification: The PISA team of ten people (Team members are provided in Annex C) are drawn mostly from the Division of Evaluation and Division of Studies and Curricula of INEADE. The Director is named as the NPM in the PISA participation agreement with the OECD.

## 50. Effectiveness of human resources for ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: EC3

Latent	Emerging	Established	Advanced
	The ILSA office is inadequately staffed or trained to carry out the assessment effectively.	The ILSA office is adequately staffed or trained to carry out the ILSA effectively, with minimal issues.	The ILSA office is adequately staffed and trained to carry out the ILSA effectively, with no issues.

Justification: Implementation was smooth for PASEC and ELAN. The PISA team consists of ten people. Other surveys will also be implemented during the same time period as PISA in 2015-17.

## 51. Scheduling priority given to ILSA activities

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NC staff are typically assigned higher priority requests related to other projects	NC staff are typically required to immediately attend or do not reschedule meeting requests from managers or colleagues (i.e., meeting requests take priority over pending work)	NC staff manage their own schedules and may reschedule ad hoc meeting requests	Administrative support for NC intercepts and schedules or co-ordinates ad hoc meeting requests on behalf of NC staff

Justification: In general, staff manage their own schedules. No one is full time though PISA is a priority. Since the Director is the PISA NPM perhaps priorities can be managed.

## 52. Availability of NPM

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NPM time is committed as required, in addition to regular responsibilities	Part time commitments from one or more people do not adequately cover the minimum PISA commitment (2 full-time equivalents). PISA responsibilities are managed through paid or unpaid overtime	Sufficient time commitments are made by NC staff to meet PISA demands, but no individuals are assigned full-time to PISA responsibilities	Sufficient person-time is allocated to PISA with at least one full-time (non-clerical) NC staff member.

Justification: The PISA team consists of the Director Ba (NPM) and nine people of INEADE. For two staff, Cheikhena Lam, Secretaire General and Massar Diop, Chef, Division of Evaluation, PISA will be the primary responsibility and priority will be given to PISA for Development for the others.

## 53. Engagement of clerical/administrative support

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities, PISA Technical Standards: Standard 17.3, PISA Technical Standards: Standard 17.4

Latent	Emerging	Established	Advanced
Clerical support is not involved in correspondence (NPM manages all correspondence directly)		Clerical support distributes outgoing correspondence from NC	Clerical support is the initial point of contact and/or has access to all incoming and outgoing correspondence

Justification: No clerical support. A “focal point”, Massar Diop, was chosen from the team who will manage all incoming and outgoing correspondence regarding PISA for Development.

## 54. National Centre co-ordination

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NC staff have no set schedule of appointments or meetings		Staff meetings are scheduled and attended regularly	NC staff use shared agendas to enable regular and ad hoc scheduling of meetings

## 46 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

Justification: Meetings are scheduled in relation to tasks and activities. The Director (NPM) has scheduled weekly meetings for PISA.

### 55. Access to a reliable, high bandwidth Internet connection and e-mail facilities

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: Resources of the National Centre

Latent	Emerging	Established	Advanced
NC has no internet access	NC has low bandwidth or unreliable internet	Reliable, high bandwidth internet is available onsite at selected terminals within the NC	NC has a fully networked environment with universal access to high bandwidth internet and email

Justification: Internet (cable and wireless) is available for the entire PISA team but it is slow and unreliable.

### 56. Computing environment

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: Resources of the National Centre

Latent	Emerging	Established	Advanced
Not all staff have full-time computer access or do not have access to document and spreadsheet applications	NC relies on personal computers of staff running Windows XP or later with Microsoft Office professional (2007 or later); all computers include Excel and Word applications but do not connect to a workplace network	NC staff all have personal or dedicated computers with standard software; access to the workplace network may be limited	NC has dedicated workplace computers for all staff with standard software and network access

Justification: The laptops of the PISA team need to be upgraded. Licenses for some software are lacking.

### 57. Data quality of ILSA

Programme output: Identify peer-to-peer learning opportunities regarding PISA participation with other countries and development partners

Reference: SABER-SA-ILSA: AQ1

Latent	Emerging	Established	Advanced
Data from the ILSA have not been published.	The country/system met sufficient standards to have its data presented beneath the main display of the international report or in an annex.	The country/system met all technical standards required to have its data presented in the main displays of the international report.	

Justification: The PASEC 2007 national report met all technical standards and is published on the web. The report for 2013 is not yet complete.

## 58. Local capacity building for ILSA

Programme output: Enhanced contextual questionnaires and data-collection instruments

Reference: SABER-SA-ILSA: SA1

Latent	Emerging	Established	Advanced
The country/system offers no opportunities to learn about ILSA.		The country/system offers some opportunities to learn about ILSA.	The country/system offers a wide range of opportunities to learn about ILSA.

Justification: INEADE has experience developing contextual and cognitive instruments for National assessments but not in using IRT. PISA materials will be developed to provide information about PISA and what it can offer Senegal.

*Project Requirement 5. Establishing security protocols for the National Centre and for national sub-contractors*

## 59. Integrity of coding

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 11.4

Latent	Emerging	Established	Advanced
	Coders are selected from bureaucratic appointments or personal networks	Coders are selected from nominated applicants using transparent criteria	

Justification: Most of the coders are from INEADE and have participated in coding before.

## 60. Computing security

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: Resources of the National Centre

Latent	Emerging	Established	Advanced
Security software is limited to pre-installed software on personal or office computers	Staff are personally responsible for maintaining antivirus and software updates without supervision	Staff follow institutional policies regarding regular software and antivirus definition updates	Dedicated IT staff or network policies ensure all software updates are installed at the institutional level

Justification: With reservations. Not clear how strictly policies are applied.

## 61. Accountability for security



48 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 8.1, PISA Technical Standards: Standard 18.2

Latent	Emerging	Established	Advanced
There are no consequences for breaches in security	There are ad hoc or discretionary policies regarding how to respond to breaches in security	There are discipline policies for breaches in security with ad hoc or discretionary consequences and individuals with access to secure materials are aware of security protocols	Where uncontrolled access is possible, legally binding confidentiality agreements enforce the data access restrictions and apply to all staff

Justification: Confidentiality agreements were signed for PASEC. Breach can result in expulsion from project.

62. Secure storage of completed materials following data collection

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 8.1, PISA Technical Standards: Standard 18.2

Latent	Emerging	Established	Advanced
No secure facilities are available to the NC		Repurposed storage or private office space is used to secure materials within the NC	NC facilities have a specific security infrastructure for storing data collection materials (i.e. it is not physically possible for individuals to access secure material without it being granted by NPM)

Justification: On entering a locked space, there are three rooms: the office of the Chief of Division, the chief statistician and a locked room for storage of secure material. Only these two people have both keys. Usually used for storage of instruments.

63. Adherence to security protocols

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 8.1, PISA Technical Standards: Standard 18.2

Latent	Emerging	Established	Advanced
NC staff and partners have no experience with or no culture of security	There is a legal or administrative framework for accountability with respect to security	Staff with access to secure materials receive training in security protocols	All staff receive training in security protocols

Justification: With reservations. There is no legal framework, but security is included in training and an informal code of security is used

## 64. Security auditing

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 8.1, PISA Technical Standards: Standard 18.2

Latent	Emerging	Established	Advanced
No tracking is made of access to secure materials	A list of individuals with permission is used to grant access to secure materials	The NPM can invoke or revoke access for any individual on the permitted list at any time	Access to secure materials is verified and recorded every time the material is accessed

Justification: The Manager of the project controls access to secure materials and permission is sought each time. Access can be revoked.

## 65. Secure space for conducting the coding operations

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: Resources of the National Centre

Latent	Emerging	Established	Advanced
No facilities are available	Multi-purpose facilities outside the NC are available for coding	Multi-purpose facilities within the NC may be secured for coding	Dedicated secured facilities are available

Justification: Coding is done at INEADE premises.

## 66. Software resources

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: Resources of the National Centre

Latent	Emerging	Established	Advanced
There is no mechanism for acquiring specialised software that is not already installed with computer at time of purchase	Individuals may download or purchase software for their own use without technical support or oversight	Individuals may download or purchase software for their own use but have access to institutional copies of required software	The NC administration maintains software licenses and manages acquisition and installation of necessary software

Justification: Some staff have analytical software such as SPSS but there are insufficient licenses.

## 50 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

*Project Requirement 9. Communication and co-ordination with schools that will participate in the assessment*

### 67. Sufficiency of data collection staff

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 1.7, PISA Technical Standards: Standard 1.8, PISA Technical Standards: Standard 3.1

Latent	Emerging	Established	Advanced
There are no available data collections staff	Available data collection staff are inexperienced, poorly trained, or do not have appropriate linguistic skills	There are few trained data collectors who must travel to many sites or many inexperienced or linguistically challenged data collectors	There is a sufficient number of qualified data collectors for all sites

Justification: Approximately 200 data collectors are trained and about 180 were used for SNERS, one for each school.

*Project Requirement 14. Establishing a training plan with key staff of the NC to attend training sessions*

### 68. Availability of ILSA training

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-ILSA: SA1

Latent	Emerging	Established	Advanced
		Opportunities to learn about ILSA are available to the country's/system's ILSA team members only.	Opportunities to learn about ILSA are available to a wide audience, in addition to the country's/system's ILSA team members.

Justification: With reservations. PISA team is hoping to have some training. They will prepare materials for a wider audience.

*Project Requirement 24. Recruitment and training of test administrators that do not have any direct relationship to the students that will be assessed and that are experienced and competent enough to carry out the testing sessions following the scripts, guidelines and procedures established*

### 69. Commitment of data collection staff

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 1.7, PISA Technical Standards: Standard 3.1, PISA Technical Standards: Standard 1.3

Latent	Emerging	Established	Advanced
Insufficient data collection staff	Data collection staff are part-time, shared with other institutions	Data collection staff are part-time, shared with other projects in the same institution	Data collection staff are specifically hired or reassigned for this role/project

Justification: Available teachers (public servants) are recruited from a data base of previous surveys with a few additions each year. Their costs are reimbursed but they are not paid as they are already employed.

#### 70. Availability of training facilities

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 6.2, PISA Technical Standards: Standard 11.2

Latent	Emerging	Established	Advanced
No facilities available (self-study or one-one-one)		Existing facilities may be repurposed to accommodate training	A dedicated training environment is available

Justification: At INEADE there are rooms available for training.

#### 71. Avoidance of conflicting interests

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 6.3

Latent	Emerging	Established	Advanced
Hiring for data collection is treated as casual employment	The NC maintains employment records of data collectors	Employment records include subjects taught by data collectors and schools worked at	Employment framework require data collectors to disclose any potential conflict of interest

Justification: Data collectors are selected from a data base of those who have served before. Since mostly elementary school surveys, most teachers have taught several subject. Conflict of interest is mainly avoided by requiring them to work at a school in a different region.

#### 72. Commitment of data collectors to training

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 6.2

## 52 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

Latent	Emerging	Established	Advanced
There is no provision or time for training	Data collectors must volunteer time or training time conflicts with regular responsibilities	Data collector time is compensated but regular responsibilities may conflict with the training schedule	Training time is compensated and is integrated with regular duties (or staff are hired exclusively for data collection)

Justification: Rely on public servants (teachers) who are already paid. For most surveys cost of travel, hotel and food are covered. Depends on budget. In *Enseignement de Langue Nationale en Afrique* (ELAN), test administrators were compensated EUR 500.

### 73. Household survey collection

Programme output: Including out-of-school 15-year-olds

Reference: PISA for Development Document

Latent	Emerging	Established	Advanced
The no in-country capacity to conduct national surveys	Public or private data collection agencies are available but do not have capacity for national surveys	The NC has access to service providers with national survey capacity	National centre staff already has staff or existing relationship with resources for national survey collection

Justification: INEADE has existing relationship with *Agence Nationale de Statistiques et Démographie* which has the capacity for household data collection.

### 74. Correct sequencing of administration of national options

Programme output: Enhanced contextual questionnaires and data-collection instruments

Reference: PISA Technical Standards: Standard 7.2

Latent	Emerging	Established	Advanced
Data collection staff have been/will be given instructions on the protocols	Data collection staff have been/will be trained after PISA design has been finalised	Data collection staff have been/will be trained using the final instruments	Final administration protocols are/will be sequentially scripted and bound and provided with the international testing materials

Justification: SNERS protocol is not long but sequentially presented and stapled. Data collection staff were trained using final instruments.

*Project Requirement 25. NPM develops a national dissemination plan of their country's participation in PISA for Development and the relevant results from the pilot*

### 75. Providing teachers with opportunities to learn about the NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: SABER-SA-NLSA: SA2

Latent	Emerging	Established	Advanced
There are no courses or workshops on the NLSA.	There are occasional courses or workshops on the NLSA.	There are some courses or workshops on the NLSA offered on a regular basis.	There are widely available high quality courses or workshops on the NLSA offered on a regular basis.

Justification: There are occasional workshops as part of in-service training for the inspectorate and for the teachers training institution.

*Project Requirement 26. Preparing and distributing testing materials to schools in a secure fashion, ensuring materials arrive safely and without suffering damage or alterations*

#### 76. Booklet distribution infrastructure

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA for Development Document

Latent	Emerging	Established	Advanced
Only ad hoc or site-specific printing resources are available		Service provider(s) or internal staff may be contracted or retasked to print and distribute booklets but must be trained with proper protocols	Existing infrastructure can be used to transport testing materials using pre-existing security protocols

Justification: Printing of instruments is done under contract by a commercial press. Testers picked up the instruments for their school from INEADE.

#### 77. Adequacy of transportation for data collectors

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 1.7, PISA Technical Standards: Standard 3.1, PISA Technical Standards: Standard 1.

Latent	Emerging	Established	Advanced
	Data collectors use public or shared transportation or use personal transportation without reimbursement	Data collectors use personal vehicles with reimbursement	Data collectors use dedicated institutional vehicles

Justification: The 200 or so data collectors and supervisors for *Système National d'Évaluation de Rendement Scolaire* (SNERS) use public transportation and are reimbursed.

## 54 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

*Project Requirement 28. Co-ordination of appropriate enhancements/adaptations/translations of instruments, manuals and guides, and field trial and verification process with international contractors.*

### 78. Effectiveness of training for data collection

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 6.1

Latent	Emerging	Established	Advanced
	Training for data collection consists of review of protocols or may not be standardised	Training for data collection is conducted individually	Training for data collection is conducted in group settings with feedback between trainees

Justification: For SNERS, training was conducted in two groups, with simulation and role playing.

### 79. Availability of document formatting and print specifications

Programme output: Enhanced contextual questionnaires and data-collection instruments

Reference: PISA Technical Standards: Standard 10.2, PISA Technical Standards: Standard 10.3, PISA Technical Standards: Standard 10.4, NPM Manual: NC responsibilities

Latent	Emerging	Established	Advanced
Authors choose formats for their own documents	Document and print specifications are not standardised or easily accessible	All document print and specifications are maintained in manuals accessible to all NC staff	

Justification: With reservations. Documents and print specifications are standardised.

*Project Requirement 29. Monitoring of school and student response rates, in co-ordination with international and national contractors, as appropriate.*

### 80. Responsiveness of sample design to data collection activities

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 1.6

Latent	Emerging	Established	Advanced
There no updates on sampling or non-response provided during data collection period		The data collection to is periodically updated to respond to sample non-response and assign replacements	Daily or real-time updates on data collection or sample design are available from centralised data processing

**Justification:** Not exactly centralised. Supervisors who go from school to school are informed during data collection of non-response and randomised replacement. Random replacements are made. The Testers provide a written report one week after collection.

*Project Requirement 30. Organisation of plans for local printing of assessment materials and verification of print and paper quality in all languages that will be covered, while maintaining security.*

81. **Description:** Quality of document proofing

**Programme output:** Enhanced contextual questionnaires and data-collection instruments

**Reference:** PISA Technical Standards: Standard 10.2, PISA Technical Standards: Standard 10.3, PISA Technical Standards: Standard 10.4, Publishing (NC responsibilities)

Latent	Emerging	Established	Advanced
Authors are responsible for proofing their own documents		Document production relies on informal experience using individual expertise or idiosyncratic methods	Clear protocols exist for the identification of potential typographic errors and/or the NC has an official dictionary and manual of style

**Justification:** Done by experienced individuals but some errors crept in the pre-test for ELAN as it was the first time working in Wolof.

82. Availability and quality of publishing resources

**Programme output:** Enhanced contextual questionnaires and data-collection instruments

**References:** NPM Manual: NC responsibilities, PISA Technical Standards: Standard 10.1

Latent	Emerging	Established	Advanced
NC has no existing relationship with publishers or publishing resources		NC has access to publishers with appropriate print quality and binding options but may require several firms to accommodate volume	A dedicated outsourced publisher can accommodate the print volume in the desired time span prior to data collection or NC has in-house resources to handle publishing

**Justification:** Have used an outsourced printer thus far that has met requirements for PASEC.

*Project Requirement 31. Planning of staffing and resources (technical and material) needed for coding of test booklets and contextual questionnaires and data management*

83. Fidelity of response coding

**Programme output:** Enhanced contextual questionnaires and data-collection instruments

**Reference:** PISA Technical Standards: Standard 11.3



## 56 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

Latent	Emerging	Established	Advanced
Response coders and managers have not received or are not acquainted with operations manual from the NPM	Coders and managers have access to the operations manual	The operations manual is used directly in training for and management of coding activities	

Justification: The manual for SNERS coders has procedures and responses and it is used in training.

*Project Requirement 32. Planning of the quality assurance process so that Quality Monitors visit a sample of schools during testing sessions to observe and document quality of sessions*

### 84. Data collection monitoring

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 9.1

Latent	Emerging	Established	Advanced
There is an insufficient quantity of external monitors	Monitors do not receive the same training or same quality of training in data collection as data collectors (see PISA Technical Standards: Standard 6);	Selected monitors are also trained as data collectors	All monitors are trained as data collectors

Justification: This was the case for SNERS. The monitors go from school to school to supervise data collection.

### Summary

Framework domain	Established Level indication	Total requirements based on PISA Technical Standards	Latent	Emerging	Established	Advanced
Organisation	Some capacity exists within a coherent administrative structure, but may lack availability or technical skills to assume responsibilities.	36**	1	7	18*	9

\* Under the domain Organisation, of the 18 Technical Standard Requirements that met the Established level, 4 of them note reservations in the justifications. Reservations indicate further improvements could be made within the Established category, which would help in the implementation of PISA.

\*\* One Technical Standard Requirement was not rated because an alternative was used that did not exactly meet the indicators but a comment was provided.

**CNA Dimension 3. Individual***Project Requirement 1. Designation of NPM and establishment of National Centre*

## 85. Adherence to protocol

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 18.2, PISA Technical Standards: Standard 17.5, PISA Technical Standards: Standard 1.2, PISA Technical Standards: Standard 9.2

Latent	Emerging	Established	Advanced
Data processing staff have no experience with large scale data processing protocols		Data processing staff have experience carrying out specific instructions in specific contexts	Data processing staff have experience operating with a variety of protocols in different contexts

Justification: Six Waves of the National evaluation *Système Nationale d'Evaluation de Rendement Scolaire* (SNERS), two waves of the International *Programme d'Amelioration de Systeme Education de la CONFEMEN* (PASEC) and Pre and Post-test waves of the national *Partenariat pour l'Amélioration de la Lecture et des Mathématiques à l'Ecole Elémentaire* (PALME) have been successfully completed. Each has different protocols and contexts.

## 86. NPM experience with dissemination of results from large scale assessment

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
LSA reports statistical results only	LSA reports include statistical tables and descriptions of statistical comparisons and notes where differences are substantive or significant	LSA reporting uses narratives to relate results from separate statistical results or data sets	LSA reporting uses multiple narratives to multiple audiences, referencing relevant data where appropriate

Justification: The 2012 SNERS narrative report is being developed. PALME requires reporting from pre-test (Baseline) and post-test (End line) results. However, there is little multi-variate analysis.

## 87. NPM regularity of communication

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities

58 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

Latent	Emerging	Established	Advanced
NPM has no email or voicemail	NPM has limited access to email and/or voicemail	NPM can access and respond to email and voicemail at least once a day	NPM can process all incoming email and voicemail each day

Justification: The focal point, Massar Diop, Chief of Evaluation, and Cheikhena Lam will assist the NPM to respond each day to emails and voice mails.

88. NPM’s skill in managing a team of project staff who carry out multiple tasks often needing simultaneous attention

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities, PISA Technical Standards: Standard 19.2

Latent	Emerging	Established	Advanced
NPM has no previous management experience	NPM has experience managing a few people sharing common skills and responsibilities	NPM has experience managing a large team or a team composed of individuals with diverse responsibilities and skill sets	NPM has experience in a matrix management structure where project team members belong to different administrative hierarchies

Justification: The SNERS team, composed of individuals with different responsibilities and skill sets, are managed by the Director who is the PISA NPM.

89. Relevance of NPM expertise

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
	NPM's expertise is related to a technical or specialised field, such as data management, analysis, or classroom instruction	NPM's expertise includes specialised knowledge as well as management experience	NPM's expertise includes specialised knowledge, management experience and knowledge of government policy issues and/or international issues

Justification: Since INEADE is a research agency, the NPM has both assessment knowledge and management experience.

90. NPM’s previous experience in planning, organising and conducting large-scale surveys

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
	NPM has experience with polling or non-intensive questionnaire-based surveys or experience implementing large-scale survey	NPM has experience with planning some aspects of large-scale assessment surveys (e.g. testing, sampling, data collection)	NPM has experience in several aspects of large-scale surveys, including design and data collection

Justification: With reservations. The Director of INEADE is the NPM and he has staff who have experience planning large-scale assessments under his supervision.

91. NPM's knowledge and confidence to represent the country at international meetings where aspects of the project will be discussed

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NPM has sufficient seniority to represent the country's interests	NPM has experience working with different stakeholder groups within country and sufficient seniority to represent country's interests	NPM has sufficient seniority to represent country's interests and knowledge of the interests of different stakeholder groups	NPM has sufficient seniority to represent the country's interests and experience interacting with different sub-national and international stakeholders

Justification: NPM has represented Senegal at PASEC meetings and has attended the PISA meetings thus far. As the Director of INEADE he has access to the Ministry of Education and the Minister.

92. NPM's knowledge of, and the confidence to deal with government agencies, school principals, parents and teachers within their own countries

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
	NPM has sufficient seniority to speak with authority on behalf of Ministry or Department	NPM has existing relationships with stakeholders within the education system	

Justification: The PISA NPM, who is the Director of INEADE, has existing relationships with stakeholders and government in the latter role.

93. NPM knowledge of language of assessments

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

60 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

Reference: SABER-SA-ILSA: EC3

Latent	Emerging	Established	Advanced
	The national/system co-ordinator or other designated team member is not fluent in the official language(s) of the assessment	The national/system co-ordinator has immediate access designated team members that are fluent in the official language(s) of the assessment	The national/system co-ordinator is fluent in the official language(s) of the assessment

Justification: The official language for both PASEC and ELAN is French, the official language of Senegal. PISA will also be conducted in French.

94. NPM’s level of oral and written communication skills in English for meetings and communications with the OECD Secretariat and with the International Contractor

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
	NPM is sufficiently fluent in English to understand general concepts and non-technical issues	NPM is sufficiently fluent in English to understand and take a position on issues presented by OECD Secretariat or International Contractor	NPM is sufficiently fluent in English to argue a specific perspective or position and represent complex or novel issues

Justification: English is third language. Not fluent enough for research or technical work but working fluency. Fluent in French which is an official language of the OECD.

95. NPM’s previous work experience in an education system and experience in educational assessment

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
		NPM is familiar with education system in a professional context	NPM has previous experience working within the education sector

Justification: The NPM and Director of INEADE has worked in the Education sector and has good knowledge of and connections with the sector.

96. NPM’s General computing skills (e.g. Microsoft Office suite, WebEx and secure FTPs)

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
Use of computers is primarily for email and internet and basic document reading/reviewing functions	Uses computers for email and internet use as well as producing and editing basic documents and presentations in standard word processors and spreadsheets	In addition to email, and internet, uses formatting conventions, edit/review functions and other shared authorship functions in office software	Uses email, internet and file sharing applications with versioning and complex formatting (e.g. document merges, conversion of file types) and/or works in a secure networked file sharing environment

Justification: NPM and Director of INEADE has general computing skills but is backed by a technical PISA team.

#### 97. English proficiency of NPM

Programme output: Identify peer-to-peer learning opportunities regarding PISA participation with other countries and development partners

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NPM has no English proficiency	NPM can limited English fluency (i.e., passive communication with basic productive communication)	NPM has mastery of English as a second language but operates professionally primarily in another language	NPM is fluent or operates professionally in English

Justification: NPM operates in French, the official language of Senegal, but can work in English.

#### *Project Requirement 4. Definition of criteria for stratification of school and student samples*

#### 98. Specialised skill for scientific probability sampling

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 9.3, PISA Technical Standards: Standard 16.1, PISA Technical Standards: Standard 17.3, PISA Technical Standards: Standard 1.3, PISA Technical Standards: Standard 1.4, PISA Technical Standards: Standard 1.5

Latent	Emerging	Established	Advanced
Survey design staff have experience with convenience sampling	Survey design staff have experience drawing simple random samples	Survey design staff have experience designing self-weighting or unweighted complex samples (multi-stage clusters and stratification)	Survey design staff have experience designing complex samples with appropriate design weights and/or performed non-response adjustments to analysis weights

## 62 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

Justification: SNERS is based on two stage sampling where a random sample of 7 200 students were sampled from a random sample of schools. Weighting was used.

### 99. Quality of replacement sample

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 1.9

Latent	Emerging	Established	Advanced
There is no replacement sample in the survey design	The replacement sample only allows convenience sampling	The replacement sample is random	The replacement sample provides random assignment of matched replacement(s) for each school

Justification: In SNERS, the replacement sample is random from the relevant classroom in the school, done on site.

*Project Requirement 10. Communication and co-ordination with international contractors for the selection of the student samples in each school*

### 100. Management of linked data files

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 12.1, PISA Technical Standards: Standard 12.5, PISA Technical Standards: Standard 16.2, PISA Technical Standards: Standard 17.3, PISA Technical Standards: Standard 17.5

Latent	Emerging	Established	Advanced
Data processing staff have been given instructions on data management protocols	Data processing staff have experience sorting or extracting data from files with primary keys or unique identifiers	Data processing staff have experience performing data merges using primary and foreign keys	

Justification: Not clear since there was no need to merge. PASEC used two booklets and those results were linked using unique identifiers.

### 101. Data manipulation skill: manipulating data structures

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 12.5, PISA Technical Standards: Standard 16.2, PISA Technical Standards: Standard 17.5, PISA Technical Standards: Standard 12.2, PISA Technical Standards: Standard 17.2

Latent	Emerging	Established	Advanced
	Staff have experience with single format data (e.g. Excel, SPSS) sorting records and adding/computing new variables	Staff have experience with single format data (e.g. Excel, SPSS), experience importing and exporting between proprietary formats using built-in software functions	Staff have experience constructing or parsing proprietary formatted data files and text-based data files with defined formats

Justification: Not clear about parsing text based data files. Experience with SNERS, PALME, PASEC and ELAN.

102. Data manipulation skill: fluency with statistical software (e.g. SPSS, SAS)

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 12.5, PISA Technical Standards: Standard 16.2, PISA Technical Standards: Standard 17.3, PISA Technical Standards: Standard 17.5, PISA Technical Standards: Standard 17.2, PISA Technical Standards: Standard 12.3

Latent	Emerging	Established	Advanced
There is no data management activity	Data management consists of simple spreadsheets and data entry	Data management is performed mainly using point-and-click menus	Data management is performed using syntax files

Justification: The analysts use macros and syntax for analysis.

*Project Requirement 14. Establishing a training plan with key staff of the NC to attend training session*

103. NPM's and NC's Familiarity with PISA skill ontology / framework

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

Reference: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
	NC staff have experience instructing students with a wide range of skill profiles	NC staff have experience developing programs for salient groups of student skills	A common framework is used by NC staff for identifying skill determinants and dependencies for different learning objectives

Justification: First time use of PISA. Team must familiarise itself with PISA frameworks.

104. NC's understanding of item response theory

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

Reference: PISA for Development Document, NPM Manual: NPM/NC responsibilities



64 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

Latent	Emerging	Established	Advanced
	NC staff have experience or familiarity with statistics and classical test theory	NC staff have used item response theory in limited context (e.g. scaling dichotomous responses)	NC staff have experience with multiple item response models (e.g. polytomous, Rasch, 2PL, 3PL)

Justification: PISA Team has not used IRT methodology.

105. NC's test development skills

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

Reference: PISA for Development Document, NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NC staff have no experience developing tests or test items	NC staff have experience developing tests or test items using well-defined test specifications	NC staff have used classical test theory to examine item and test difficulty and discrimination/reliability and select appropriate items	NC staff use multivariate statistics to examine test dimensionality, item bias or differential item functioning, and test information and increase the accuracy and relevance of tests

Justification: The team would benefit from training in scaling and item development related to IRT methodology.

*Project Requirement 28. Co-ordination of appropriate enhancements/adaptations/translations of instruments, manuals and guides, and field trial and verification process with international contractors*

106. Fidelity of administration in local contexts

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 5.1, PISA Technical Standards: Standard 5.2, PISA Technical Standards: Standard 4.4

Latent	Emerging	Established	Advanced
Translators or staff responsible for adaptation have translated data collection protocols	Translators or staff responsible for adaptation have been trained in data collection procedures	Translators or staff responsible for adaptation have participated in data collection	Translators or staff responsible for adaptation have been trained in PISA data collection procedures

Justification: Translators on the Committee for ELAN participated in training and some also participated in data collection. PISA has not been implemented yet.

107. Description: Quality of training for data collection

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

Reference: PISA Technical Standards: Standard 6.1

Latent	Emerging	Established	Advanced
	Data collection staff have been trained in data collection protocols	Data collection staff have participated in data collection in previous survey or training but received no guidance or feedback regarding the effectiveness or appropriateness of method	Data collection staff have been monitored during previous or mock data collection and have received feedback on their adherence to protocols during previous data collection

Justification: Yes, based on ELAN and SNERS. Did not use feedback but training is adapted for each wave according to changes. During the last wave of SNERS in line with the shift from teaching by objectives to teaching for competence, both questionnaires and training were adapted.

#### 108. Adequacy of translator assessment background

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

Reference: PISA Technical Standards: Standard 4.2

Latent	Emerging	Established	Advanced
Translators or staff responsible for adaptation have no experience translating or adapting test items	Translators or staff responsible for adaptation have background or experience with education or psychology	Translators or staff responsible for adaptation are experienced teachers	Translators or staff responsible for adaptation are also professional item writers

Justification: No experience working from English however, PISA for Development instruments will be provided in French. For *Enseignement de Langue Nationale en Afrique* (ELAN) translation to national languages was done by a committee of High school teachers supervised by a University Professor.

#### 109. Translator knowledge of PISA framework

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

Reference: PISA Technical Standards: Standard 4.2

Latent	Emerging	Established	Advanced
Translators or staff responsible for adaptation have no experience or knowledge of PISA framework		Translators or staff responsible for adaptation are knowledgeable about the PISA assessment framework	Translators or staff responsible for adaptation can reliably predict the difficulty of PISA test items

Justification: Have not done PISA yet. But the plan is to base translation on PISA Framework

#### 110. Appropriateness of instrument translation and adaptation to local contexts

Programme output: Enhanced contextual questionnaires and data-collection instruments

Reference: PISA Technical Standards: Standard 4.3, PISA Technical Standards: Standard 5.1

66 – ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

Latent	Emerging	Established	Advanced
	Translators have limited knowledge of common usage of testing languages	Translators have academic (i.e., foreign) knowledge of testing language usage in local contexts	Translators or staff responsible for adaptation have functional knowledge of dialects or language in different contexts

Justification: Yes but only in the context of ELAN where translators have worked to translate from French to National languages. Also had support from the Division of National Languages at the Ministry. Tentative intent is for PISA assessments to be in French, Wolof and Arabic.

111. Fidelity of instrument translation and adaptation to local contexts

Programme output: Enhanced contextual questionnaires and data-collection instruments

Reference: PISA Technical Standards: Standard 4.3, PISA Technical Standards: Standard 5.2

Latent	Emerging	Established	Advanced
Translators or staff responsible for adaptation have no experience with research		Translators or staff responsible for instrument adaptation have experience with survey research or experience with questionnaire design	Translators or staff responsible for instrument adaption are knowledgeable about the constructs measured by PISA questionnaires (e.g. SES, school climate, engagement with learning, etc.)

Justification: For ELAN, translation was done by a committee. The Supervisor was a University Professor who was experienced in measurement. Have not worked with PISA constructs

*Project Requirement 31. Planning of staffing and resources (technical and material) needed for coding of test booklets and contextual questionnaires and data management*

112. Response coding expertise

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

Reference: PISA Technical Standards: Standard 11.1

Latent	Emerging	Established	Advanced
Response coders have no experience with student work	Response coders have experience manually scoring student work	Response coders have experience manually coding student responses in large-scale assessments	Response coders are recalibrated periodically based on results of reliability analysis (see Standard 11.3)

Justification: Coding was done for a sample of 7 200 for SNERS. After coding, a 10% sample is drawn to test for inter-rater reliability and tests are re-coded if there is more than 5% variance.

## Summary

Framework domain	Established Level indication	Total requirements based on PISA Technical Standards	Latent	Emerging	Established	Advanced
Individual	Individuals have sufficient knowledge, interest and aptitude to allow development of requisite skills or attributes with brief workplace training and/or independent training and practice.	28	1	2	16*	9

Notes: \* Under the domain Individual, of the 16 Technical Standard Requirements that met the Established level, 1 of them note reservations in the justifications. Reservations indicate further improvements could be made within the Established category, which would help

## Overall Summary

Framework domain	Established Level indication	Total requirements based on PISA Technical Standards	Latent	Emerging	Established	Advanced
Enabling environment	Political, social or economic structures exist that can support implementation of PISA for Development.	48	3	7	18*	20
Organisation	Some capacity exists within a coherent administrative structure, but may lack availability or technical skills to assume responsibilities.	36**	1	5	18*	11
Individual	Individuals have sufficient knowledge, interest and aptitude to allow development of requisite skills or attributes with brief workplace training and/or independent training and practice.	28	1	2	16*	9

Notes: \* Under the domain Enabling Environment, of the 18 Technical Standard Requirements that met the Established level, 6 of them note reservations in the justifications. Under the domain Organisation, of the 18 Technical Standard Requirements that met the Established level, 4 of them note reservations in the justifications. Under the domain Individual, of the 16 Technical Standard Requirements that met the Established level, 1 of them note reservations in the justifications. Reservations indicate further improvements could be made within the Established category, which would help in the implementation of PISA.

\*\* One Technical Standard Requirement was not rated because an alternative was used that did not exactly meet the indicators but a comment was provided.



## ANNEX B: TERMS OF REFERENCE

This annex includes the introduction and statement of work sections of the OECD Terms of Reference for CNA and CBP.

### *Introduction*

OECD is seeking to enhance its Programme for International Student Assessment (PISA) to make it more relevant for developing countries. Through its PISA for development project, adapted survey instruments will be developed to allow developing countries to assess 15-year-olds' competencies in the key subjects of reading, mathematics and science, while at the same time providing the countries with an opportunity to build their capacity to manage student assessment and apply the result for system improvement .

### *Statement of Work*

These terms of reference (ToR) cover the work to be carried out by three consultants (each hired with the same ToR) as part of the PISA for Development project. The purpose of the work is to ensure that for each of the 6 participating countries<sup>1</sup> the following deliverables are completed in a timely and accurate manner in order to support the effective implementing of the project:

- A. Capacity Needs-Assessment (CNA) report for each participating country focusing on the institutional and the student assessment areas related to the implementation of the PISA for Development project.
- B. Capacity Building Plan (CBP) prepared for each of the participating countries that are fully costed and directly address the needs identified in the CNA for each country.

In addition and on the basis of Deliverables A and B, the consultants will be required to produce a third deliverable:

- C. Terms of Reference that will serve to guide the work of the International Contractor(s) in implementing the capacity building plans in each of the participating countries.

In order to produce these three deliverables the consultants will be required to complete the necessary tasks involved in co-ordination with the project team at the OECD and in-country with each of the participating countries. The tasks associated with each deliverable are described in the following three sub-sections.

#### *Deliverable A: Capacity Needs Analysis reports*

In the context of the project's objectives, the roles and responsibilities for National Centres (NC) and National Project Managers (NPM) and the capacity building priorities identified by the countries, the consultants will undertake a capacity needs analysis (CNA) for each of the participating countries.

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1. Participating countries include: Ecuador, Guatemala, Senegal and Zambia. Cambodia and Paraguay are in the process of finalising participation agreements with the OECD.

The benchmark for the CNA will be the necessary capacity required in the context of the PISA for Development project, which is defined as:

- The ability of the individuals and institutions responsible for the project in each country to perform the necessary functions (as set out in the roles and responsibilities for NC and NPM), solve the likely problems that will arise during implementation and set and achieve project objectives in a sustainable manner.

Countries may desire future capacities for student assessment that go beyond this necessary ability and include competencies in, for example, item development, assessment methods and analysis of assessment data to support policy. In these cases the consultants will reflect the countries' desire in a broader statement of capacity than the one indicated above, but will ensure that these aspirations are rooted in a realistic appraisal of what is possible to achieve in a three year timeframe and given the capacity assets that countries are starting with.

The CNA for each country should be based on existing recent and relevant assessments of capacity for student assessment that may have been undertaken and a clear analysis of desired future capacities (as summarised above) against current capacities. The assessment should also be couched in the broader context of the participating countries' education sector policies, strategies and priorities generally and their strategies for strengthening student assessment in particular. The assessment should generate an understanding of capacity assets and needs, which in turn should lead to the formulation of a capacity building plan (CBP, Deliverable B).

The CNA is integral to the project planning and programming process, as the understanding of capacity assets and needs will serve as key inputs into the formulation of the capacity building plan. The consultants will identify the indicators to be used to measure capacity assets that will serve as a foundation for the subsequent monitoring and evaluation of capacity development. The consultants will develop an overall capacity assessment framework to facilitate the task and this will be composed of three dimensions:

- The enabling environment, particularly the Ministry of Education and other users of the results of the PISA for development project.
- Organisation, particularly the National Centre and any sub-national institutions that will be involved in the project.
- Individual, especially the staff of the National Centre and related organisations, in particular the National Project Manager and his/her team.

In undertaking this task the consultants should ensure that at the outset of the activity the capacity assessment objectives and expectations of the country are clarified in the context of the aims and objectives of the PISA for development project and the resources available and that the key stakeholders are identified and engaged throughout the process. In addition, the consultants should adapt the capacity assessment framework to local needs and priorities in each country, in particular the capacity asset indicators that are used. The assessment of existing capacity levels should be transparent and the summarising and interpretation of results should be clearly communicated to key stakeholders prior to the drafting of the capacity assessment report for each country.

In preparing the capacity assessment report for each country, it will be important for the consultants to include the process and methodology adopted, the stakeholders (internal/external) that were consulted, their perspectives and insights on the organisation housing the National Centre, a review and analysis of quantitative and qualitative information, and the resulting capacity development priority needs. The results

should be reviewed, validated and enhanced through consultation meetings with the main stakeholders in each country and the OECD, prior to finalisation.

*Deliverable B: Capacity Building Plans*

On the basis of the CNA reports, the consultants should complete and agree with each partner country and OECD a CBP covering the three years of project implementation, taking care to ensure that training and capacity building opportunities are costed and scheduled in a timely and effective way. Specifically, the consultants are tasked to design a programme that will equip the National Centre, the National Project Manager and other related actors with the capacity they require to implement the PISA for Development project successfully and, in addition, respond to particular priorities for student assessment that the participating countries identify beyond those necessary for project implementation, such as assessment methods, item development, analysis and use of data to support policy development and student assessment for curriculum reform.

Technical capacity building, institution building and knowledge-transfer opportunities have been clearly identified as part of the implementation of the project with each of the participating countries and development partners. These opportunities include, but are not restricted to, the following:

- Procedures for and verification of translations and adaptations of assessment materials (different languages and/or different adaptations of same language versions).
- Sample design and selection, including population coverage, exclusions and response rates.
- Field administration of the assessment and data collection.
- Quality assurance of the field administration and data collection.
- Marking and coding of open-ended and multiple-choice items (cognitive and questionnaire responses).
- Data entry, cleaning and verification.
- Scaling of results using IRT models (cognitive and contextual).
- Calculation of specific indices (e.g. ESCS gradients).
- Calculation, analysis and calibration of item parameters (item difficulty, point-bi-serial indices and other psychometric coefficients for possible data entry errors, translation or other problems).
- Compilation of data sets for analysis (student responses and scaled scores).
- Exploitation of PISA data sets for analysis (country-specific and international data sets).
- PISA Assessment Frameworks in Mathematics, Reading and Science (basis of the content, competencies and skills assessment).
- Item development process (based on PISA frameworks).
- Design and drafting of analytical report following PISA country report models.
- Specific technical topics: plausible variables, IRT models, conditioning, scaling, DIF (Xgender, Xcountry and Xlanguage), student and school weights.

In some cases, development partners may establish extended engagement with participating countries for technical assistance to support institutional capacity building and implementation that supports the PISA participation process and the consultants will need to take account of these contributions in the CBP.



The CBP for each country should respond to the needs identified and consist of initiatives and activities that build the foundation for capacity development as well as build momentum for the implementation of the project, the use of the results of student assessment and the achievement of the desired future capacities in a timely fashion. The CBP should also complement and, where possible, be integrated with the participating countries' broader strategies for student assessment at all levels of their education systems.

The CBP should include indicators to measure progress in the implementation of capacity development over the three years of the project. The programme should have a clear baseline and targets for each year of implementation should be established for each indicator. The process of monitoring progress should also allow the refinement of capacity development response strategies and potentially the design of new initiatives to address evolving needs. The CBP should be accurately costed in the context of the PISA for development international costs budget, the in-country project costs budget of each country and the additional development partner support that may be available in each country, beyond the project funding.

*Deliverable C: Terms of Reference for an International Contractor(s) to implement the CBP in each country*

Following the same highly collaborative model of PISA participation, the participating countries will benefit from international expertise and the technical services of national and international contractors supervised by the OECD and with support from development partners. ***The consultants will develop ToR for these international contractors in respect of the implementation of the CBP for each country and agree these with the countries and OECD.*** These ToR will either form the basis for a separate contract for an international contractor to support capacity building under the project or be incorporated within a broader set of ToR for an international contractor(s) to work closely with the governments of participating countries and concerned development partners to undertake the project activities described in the PISA for Development project document and elaborated in the Project Implementation Plans for each country.

The ToR for the international contractor should include an introduction and background to the work, including references to the capacity needs analysis reports and capacity building plans for each country. The ToR should elaborate the main areas for capacity building in the project generally and for each country particularly, drawing on the needs analysis and the capacity building plans, and specify the services to be provided by the international contractor in each of these areas. The ToR should also specify the expected outputs and deliverables for which the international contractor(s) will be responsible and describe the counter-parting arrangements that are in place in each country. In addition the ToR will elaborate the reporting requirements, the contracting and administrative arrangements, the key documents that should inform the work and the timing of the contract(s).

## ANNEX C: INEADE AND THE PISA FOR DEVELOPMENT TEAM, SENEGAL

*Institut National d'Étude et d'Action pour le Développement de l'Éducation (INEADE)* is an independent public agency created in 1981 responsible for educational assessment and research for the Government of Senegal. Its mission is to incite, to stimulate, to co-ordinate all necessary activities for the development of education in collaboration with other educational research organisations. It reports to the Minister of Education. It is responsible for evaluation of public policy and student performance.

## PISA team, September 2014

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## PISA FOR DEVELOPMENT

# Capacity Needs Analysis: Senegal

PISA for Development is an initiative of the OECD and development partners that aims to identify how its Programme for International Student Assessment (PISA) can best support evidence-based policy making in emerging and developing economies – and contribute to the UN-led definition of global learning goals for the post-2015 agenda. In addition the project will help to build country capacity in assessment, analysis and use of results for monitoring and improvement among participating countries. Senegal is one of six countries participating in the project, and the Ministry of Education, through the National Institute for Study and Action for Development in Education (INEADE), is responsible for the project in the country. This report presents the results of an analysis of Senegal in respect of its capacity for managing large scale student assessments, such as PISA.

The results of this report are being used to design a capacity building plan for Senegal that will be implemented by the OECD, its contractors, the Ministry of Education, and the National Institute for Study and Action for Development in Education (INEADE), through the PISA for Development project.