

THE EARTH INSTITUTE
COLUMBIA UNIVERSITY

Professional Officers of Research Careers

February 2019

Contents

APPOINTMENTS AND PROMOTIONS-PART A	3
Professional Officers of Research	4
Associate Research Scientist/ Scholar (ARS).....	5
Research Scientist/ Scholar (RS)	8
Senior Research Scientist/ Scholar (SRS)	9
Practice-Oriented Scholars	9
Earth Institute Joint Appointments.....	11
APPENDIX A: PROFESSIONAL OFFICERS OF RESEARCH	14
Appendix A1: Characteristic Performance Standards for Professional Officers of Research	14
<i>Center for Environmental Research and Conservation (CERC) Characteristic Performance Standards for Professional Officers of Research</i>	<i>17</i>
<i>Center for Global Health and Economic Development (CGHED) Characteristic Performance Standards for Professional Officers of Research</i>	<i>19</i>
<i>Center for International Earth Science Information Network (CIESIN) Characteristic Performance Standards for Professional Officers of Research</i>	<i>21</i>
<i>Center for International Earth Science Information Network (CIESIN) Characteristics of Practice-Oriented Scholarship</i>	<i>24</i>
<i>Center for Research on Environmental Decisions (CRED) Characteristic Performance Standards for Professional Officers of Research</i>	<i>26</i>
<i>Center for Research on Environmental Decisions (CRED) Characteristics of Practice-Oriented Scholarship</i>	<i>28</i>
<i>Center for the Study of Science and Religion (CSSR) Characteristic Performance Standards for Professional Officers of Research</i>	<i>30</i>

<i>Columbia Water Center Characteristic Performance Standards for Professional Officers of Research</i>	33
<i>International Research Institute for Climate and Society (IRI) Characteristic Performance Standards for Professional Officers of Research</i>	35
<i>International Research Institute for Climate and Society (IRI) Characteristics of Practice-Oriented Work</i>	37
<i>Urban Design Lab (UDL) Characteristic Performance Standards for Professional Officers of Research</i>	39
Appendix A2: Promotion and Appointment to ARS Grade	42
Appendix A3: Promotion and Appointment to RS Grade	45
Appendix A4: Promotion and Appointment to SRS Grade	49
Appendix A5: Responsibilities of Practice-Oriented Professional Officers of Research	42
Appendix A6: Standard Letter to Referees for Internal ARS Candidates	53
Appendix A7: Standard Letter to Referees for Internal RS/SRS Candidates	57
Appendix A8: Standard Letter to Referees for external ARS Candidates	59
Appendix A9: Standard Letter to Referees for External RS/SRS Candidates	61
Appendix A10: Standard Letter to Referees for Internal Practice-Oriented ARS Candidates	63
Appendix A11: Standard Letter to Referees for Internal Practice-Oriented RS/SRS Candidates	65
Appendix A12: Template of Memorandum of Agreement for Joint Appointments within the Earth Institute	67
APPOINTMENTS AND PROMOTIONS, PART B (Staff Officers)	69
Staff Officers of Research at the Earth Institute	70
<i>Columbia Staff Associate</i>	70
<i>Earth Institute Staff Associate</i>	70
Appointment to Staff Associate, Senior Staff Associate I, or Senior Staff Associate II at the Earth Institute	71
Promotion from Staff Associate to Senior Staff Associate I, and Senior Staff Associate II at the Earth Institute	72
GENERIC PERFORMANCE STANDARDS (Part C)	73
Annual Performance Review Timetable	74

APPOINTMENTS AND PROMOTIONS-PART A

This document describes the Earth Institute's policies on hiring and promotion of Professional Officers of Research and provides these officers with information relevant to their work in the Institute and to their career development in general. This policy document on staffing will be periodically reviewed and updated as the Earth Institute continues to evolve. This document supplements the Columbia University Faculty Handbook (in particular, chapters IV and VI, which deal with officers of research) and all existing Columbia University Human Resources Department practices, which apply to all Earth Institute employees, and are viewable online at <http://www.hr.columbia.edu/hr/index.html>.

Policies and procedures for Lamont Research Professors and Professional Officers of Research at Lamont are described in separate documents, and are not dealt with here.

All promotion and appointment processes described in this document embody the following four basic steps:

1. Internal decision regarding whether the action should proceed;
2. Formal internal decision to request and receive outside letters;
3. Review and recommendation by the Unit to appoint or promote;
4. Review and recommendation by the Earth Institute to appoint or promote.

The mechanisms of each individual step are described in detail in the appendices.

Performance expectations are dependent upon the Unit mission. In general, fulfilling performance expectations requires traditional academic achievement in original research and publications, as well as achievement across a range of Unit activities, including the development of new methods, products and services, the management of research and development projects and capacity building. Teamwork, the ability to work in a multidisciplinary environment, and a willingness to learn as well as to teach new ideas are also important requirements. Close coordination with supervisors is essential to the mutual advancement of all personnel. In all cases, quality and excellence of performance will be considered in relation to the seven components listed below.

Components for Evaluation

1. *Qualifications/Experience* - Academic qualifications, mission-related experience, relevant honors, leadership roles.
2. *Knowledge* - Relevant knowledge and expertise, both academic and otherwise, and its expression in written and verbal forms.
3. *Mission* - Knowledge of, support for and the ability to represent the Unit's mission.
4. *Productivity* - Achievement of project goals in a timely way, such as by publishing, meeting contract obligations, establishing new methods or operational systems, delivering products and training. Effectiveness in managing time and resources.

5. *Collaboration/Mentoring* - Fostering, leading, coordinating and participating in collaborative projects and activities within and outside the Unit. Assisting colleagues and mentoring.
6. *Innovation* - Creativity and inventiveness in identifying opportunities and issues, solving problems, and developing new knowledge, methods, products, and approaches.
7. *Resources* - Contributions to generation of external resources for the Unit, whether as project funding, in-kind support, or external expertise and labor.

Every Professional Officer of Research is subject to an annual performance review. The annual performance review is an important component of the management of human resources for the Unit as the review enables dialogue among the Officer, his/her supervisor, and the Unit Director on accomplishments, areas for adjustment and work priorities for the coming year. It also informs the allocation of annual pay adjustments as possible under prevailing University policy.

Professional Officers of Research

This section delineates the procedure of promoting or not renewing the appointment of an employee in the research career track to one of the three basic grades, Associate Research Scientist/ Scholar (ARS), Research Scientist/ Scholar (RS), and Senior Research Scientist/ Scholar (SRS) from the next lower grade of Earth Institute employment. The standards of successful performance are indicated in the table in Appendix A1.

All Unit staff who are senior to the candidate will be provided the opportunity to comment on the action. It is expected that the Unit Director will supervise an internal vetting process that will be documented in the candidate's file. "Senior Staff" usually includes those who hold the rank of Research Scientist/Scholar and Senior Research Scientist/Scholar and tenured Associate Professors and Professors. In small units, where there is an insufficient number (3) of individuals holding these ranks, the Unit Director may solicit assistance from Senior Staff in other Units of the Earth Institute.

The process of promotion includes the solicitation of external referee letters, so called "outside letters." These letters may be written not only by persons in academic positions, but also by persons of sufficient seniority in non-academic capacities relevant to the candidate's experience, so long as the persons have familiarity with the academic research enterprise. When compiling a list of outside letter writers, a committee should choose individuals who have no known bias in the process. Individuals who have had close collaborations with the candidate may be chosen only if a case can be made that these individuals bring special knowledge and insight to the evaluation. If this is the case, all past and current professional relationships between the letter writer and the candidate must be documented in the file.

The Earth Institute follows all Columbia University termination procedures as outlined in the Faculty Handbook. To provide Earth Institute-wide oversight of units' human resources practices, upon termination of an appointment at any level, the Unit Director with input from Unit Senior Staff will provide a confidential report to the Earth Institute Appointments Committee of the Earth Institute faculty delineating the circumstances and reasons for termination. The Appointments Committee will review these reports on a biannual basis and report to the Director or Executive Director on units' practices as necessary.

Associate Research Scientist/ Scholar (ARS)

The ARS grade is the normal point of entry into the research career track. It is developmental in nature, as the candidate is in the early stages of his/her career and is advancing skills at a relatively rapid rate. Generally, appointment at this level occurs through advertisement and open competition. Occasionally, as noted below, a Postdoctoral Research Scientist/ Scholar (PDRS) may be invited to join the regular staff as an ARS (contingent on availability of long-term funding to support the position). Only PDRS who have cleared the Affirmative Action/Equal Opportunity (AA/EO) procedures in their original appointment are eligible for promotion to ARS. See Appendix A2 for further detail about the procedure for promotion and appointment to the ARS level. In the event of an abnormal circumstance that would necessitate a deviation from the outlined procedure, a unit director may request an altered process from the Chair of the Appointments Committee, the Chair of the Earth Institute faculty and the Director or Executive Director. Proceeding with any other process would necessitate approvals from these three individuals.

Subject to satisfactory performance and the availability of funds, the ARS is renewed yearly for up to six years; recruited ARS will be assigned track status based on prior experience. Assignment of track status means establishing the number of years of ARS status that have already been served owing to relevant experience in a prior job. Track status will be documented in the ARS file at the time of appointment. In addition, the assigned supervisor and nominal process calendar will be documented in the ARS file. ARS staff undergoes midterm review in the third year (see below). An ARS may request, from the Unit Director, two separate extensions of the ARS appointment beyond the usual six years, each request for up to one year, due to medical, infant care, or other compelling circumstances. When letters of recommendation are sought for promotion, such letters will indicate if extensions have been granted during the term of the appointment.

In addition to traditional annual performance reviews, midterm reviews of the Associate Research Scientist's/ Scholar's overall accomplishments are conducted after three years (or equivalent track status). The ARS midterm review process begins in April, and concludes by June. The cohort to be reviewed extends from scientists/ scholars who were appointed from July 1 to December 31 three years earlier (i.e. scientists/ scholars who have completed or will shortly complete three years as an ARS) and scientists/ scholars who

were appointed from January 1 to June 30 (i.e. scientists/ scholars who have already completed three and a half years as an ARS).

Consistent with the length of extensions to the appointment (as described above), a delay in the timing of the midterm review may be requested from the Unit Director; such a delay in the timing of the midterm review will delay the deadline for consideration for promotion to Research Scientist/Scholar by a like amount. The goals of the midterm review are listed below. Distinct from the annual performance review, which focuses on performance over the last year, the midterm review has a focus on the future of the candidate's career and brings perspectives additional to that of the supervisor.

Midterm Review Goals

- Provide the individual with feedback about progress in the ARS career track,
- Provide the individual a chance to reflect upon and advocate his or her ideas and agenda,
- Identify people whose capabilities are best suited to a different track, and
- Identify high-achievers who should be considered for early promotion.

The review is conducted by a review committee (appointed by the Unit Director in consultation with the candidate) whose make-up will typically comprise an Advocate (e.g., the research mentor) and two scientists/ scholars at or beyond the RS level from within the Unit or from elsewhere within the Earth Institute as appropriate, or faculty of appropriate rank from affiliated academic departments. The Advocate is appointed by the Unit Director in consultation with the candidate and is a member of the Senior Staff whose role is to support the advancement of the candidate. The Unit Director attends the review committee meeting. A senior research scientist/ scholar or full professor, appointed by the Unit Director, with no supervisory role over the candidate chairs the committee. This individual, if appropriate, may be appointed from outside the candidate's Unit.

In preparation for the review, the ARS should assemble:

1. A CV with complete publication list;
2. A letter of support from a peer familiar with the candidate's work (optional);
3. Reprints or preprints of papers based on work done as an ARS (maximum 4);
4. Statement of past, present and future research interests;
5. Statement of any other contributions, past, present, and potential, as applicable. These will vary according to the research area of the ARS and may include, but are not limited to the list below.
6. Annotated current and pending support statement.

Examples of ARS Contributions

- Development and implementation of, or contributions to, important research initiatives;

- Development and implementation of, or contributions to, important education initiatives;
- Technical innovation in the pursuit of the Unit's mission;
- Operational and/or service contributions to the Unit and to the scientific community at large;

The committee reviews the materials prepared by the ARS, and interviews the ARS. At the interview, the ARS presents an overview of past, present and future work, and answers questions from the committee.

The committee produces a written report comprising:

1. A statement of the outcome of the review, from among the following four possible outcomes:
 - (a) Performance is satisfactory and the individual continues in the Associate Research Scientist/ Scholar position.
 - (b) Performance is considered exceptional and the individual is offered the opportunity for consideration for early promotion to Research Scientist/ Scholar.
 - (c) Performance is considered marginal. The individual is permitted to remain in the Associate Research Scientist/Scholar position but is counseled on necessary mid-course corrections.
 - (d) Performance is considered unsatisfactory and the appointment is terminated with the individual receiving the proper notice of nonrenewal. The individual has up to 12 months to complete the terms of the appointment and establish a new position elsewhere.
2. For all candidates who will be continuing in the ARS track:
 - (a) An evaluation of the candidate's standing with respect to the Unit promotion criteria.
 - (b) Concrete suggestions for the remaining time as an ARS. In addition to research objectives, the suggestions may also address adjustments to supervisory or mentoring roles as may be needed to enable desired career developments.
3. All candidates whose appointments will not be renewed will be provided a clear and thorough description of why the committee is making this recommendation.
4. For all candidates, a clear and thorough description of their strengths and weaknesses.

The report should be drafted by the Review Committee Chair, and reviewed and approved by the other committee members, after which the report is reviewed by the Earth Institute Appointments Committee who have the option of making additional comments and recommendations. Following review by the Earth Institute Appointments Committee, in cases where the outcome is (1a), (1b), or (1c), the report is given to the ARS and discussed in person with the Unit Director with the Advocate present. If performance is considered unsatisfactory (1d), then the recommendation, with any additional comments from the

Earth Institute Appointments Committee, is forwarded to the Earth Institute Director or Executive Director for approval. If approved, the Unit Director informs the candidate in writing of the outcome and meets with the candidate to discuss options.

There may be instances in which annual performance reviews or the mid-term review of research performance predict that a Professional Officer of Research will not meet criteria for promotion after six years at his/her current rank. However, that officer may have developed a specific set of skills and knowledge of high value to the Unit. If recommendations support the premise that the researcher can competently perform research duties better defined by a Staff Associate or Senior Staff Associate title, the Unit would be expected to identify this situation during the first three years of the appointment. The Unit would then have the opportunity to demonstrate this to the Appointments Committee of the Earth Institute faculty. In such cases, the Unit would argue that losing the researcher would be a detriment to its research agenda. If this case is established, the Earth Institute will support the Unit in offering the officer a change of position from Professional Officer of Research to Staff Officer of Research.

Research Scientist/ Scholar (RS)

Promotion to the RS Grade typically occurs following six years experience (or equivalent) at the ARS level. The candidate must have held the rank of Ph.D., or another terminal degree, for no less than seven years. The Unit Director must automatically initiate this process in the sixth year of active ARS status if not initiated sooner (active status does not include time taken in family or medical leave). The positions of employees who are not promoted to the RS level after six years experience (or equivalent) at the ARS level are terminated following one additional year during which the employee has time to seek other employment. The RS grade is comparable to a tenured faculty position at a university, and will represent the final promotion for many research scientists/ scholars. However, all Earth Institute appointments into the Professional Officer of Research track must be made with the intention that the researcher will be able to advance along the defined career track, ultimately to Senior Research Scientist.

On rare occasion, such a promotion may occur sooner, in cases of exceptional performance. Nominations for promotion prior to year six may be advanced only with compelling justification. An attempt at an early promotion carries a risk, as it will result in termination of the ARS appointment if it fails. Given the effort required for the promotion process from persons both internal and external to the Unit, candidates are strongly discouraged from considering an early promotion unless the perceived chances for success are high.

See Appendix A3 for further detail about the procedure for promotion and appointment to RS. In the event of an abnormal circumstance that would necessitate a deviation from the outlined procedure, a unit director may request an altered process from the Chair of the Appointments Committee, the Chair of the Earth Institute faculty and the Director or

Executive Director. Proceeding with any other process would necessitate approvals from these three individuals.

Senior Research Scientist/ Scholar (SRS)

Promotion or appointment to the SRS Grade is considered only for research staff members that demonstrate outstanding scientific achievement and leadership. Leadership can be demonstrated in a number of ways including senior managerial and organizational roles as well as intellectual leadership. Promotion may be advanced following three years of superior performance at the RS level. Further detail about the procedure for promotion and appointment to the SRS level is provided in Appendix A4. In the event of an abnormal circumstance that would necessitate a deviation from the outlined procedure, a unit director may request an altered process from the Chair of the Appointments Committee, the Chair of the Earth Institute faculty and the Director or Executive Director. Proceeding with any other process would necessitate approvals from these three individuals. The SRS assumes an active role in project development and supervision, and provides high quality mentoring to other staff members.

Practice-Oriented Scholars

The following is a set of guidelines to assist unit directors in the appointment or promotion of practice-oriented scholars. Professional Officers of Research whose work falls into the categories described in the unit-specific appendices may be considered practice-oriented scholars and may be subject to these guidelines. Unit directors may use these guidelines to develop specific review criteria for practice-oriented positions. The Earth Institute faculty Practice Committee will assist in the development of specific metrics and criteria, as necessary. Leadership for this process is the responsibility of the unit director. (See Appendix A for unit-specific tables of Characteristics of Practice-Oriented Work.)

In appointing a practice-oriented scholar, the unit directors should develop Responsibilities of Practice-Oriented Professional Officers of Research, which lays out initial expectations, defining products and outcomes, and scope of work, particularly any practice activities beyond the traditional scope of research responsibilities. (See Appendix A5 for the standard form for the Responsibilities of Practice-Oriented Professional Officers of Research.) Products and outcomes may include, but are not limited to, reports, memoranda for decision makers, agendas from meetings or briefings with decision makers, and presentation packages. This document will give the criteria for how practice work will be judged at a scholar's review. Earth Institute human resource units will include this document as an attachment to the letter of offer. The Practice Committee will assist in the drafting of this document. The Practice Committee will review and record all

Responsibilities of Practice-Oriented Professional Officers of Research documents and agreed-on review criteria. This document should be revisited at each review and the unit director may make modifications to it, considering input from the scholar, and in the case of a change from the initial expectations, with agreement from the scholar. The Appointments Committee will review and approve (or propose changes to) all Responsibilities of Practice-Oriented Professional Officers of Research documents and all changes made to them.

When the unit creates an appointment, promotion, mid-term or review committee, members of the committee should be versed in practice-oriented scholarship and its evaluation. The number of these members should reflect the proportion of practice work conducted by the scholar.

Practice-oriented scholars prepare annotated versions of their *CV*'s, documenting their specific creative contributions, explaining choice of publication and funding venues, providing a self-assessment of their impacts on the field and clarifying any other aspects of their background and future plans that may not be clear to reviewers from a non-practice discipline.

The appropriate review committee shall prepare a dossier for each candidate. It should include any prior reviews of the practice-oriented scholar's work.

As with all appointments and promotions, the committee shall seek external letters that evaluate the candidates work. External letter writers for practice oriented scholars should be made aware of the fact that the candidate is a practice oriented scholar. The review criteria should be provided to them. Potential letter writers should also be provided with the initial position description or the Responsibilities of Practice-Oriented Professional Officers of Research document indicating the practice expectations. External letter writers who have experience with practice work and its evaluation should be included among a candidate's list of external evaluators. The number of these letter writers should reflect the balance of practice work and other scholarly work conducted by the scholar. Endorsements from external letter writers should indicate the utility or usefulness of the practice-oriented work. (See Appendices 10 and 11 for standard letters to external referees for Practice-Oriented Professional Officers of Research.)

Reviews for practice-oriented scholars should measure the degree to which scholars address decision making or policies. Reviews should address the following questions, and scholars should achieve excellence in at least several of these areas.

- Has the practice oriented scholar been engaged in fieldwork on cutting-edge issues of sustainability and advancing the Earth Institute's and the particular unit's mission?
- Is the practice-oriented scholar doing practice work of high quality and reporting on it in leading journals or conferences?
 - If the work is high quality, but is not being reported in leading journals and/or conferences, is it being recorded or otherwise widely shared and reviewed in another legitimate way?
- Has the practice-oriented scholar extended his or her expertise in new directions? For example, has the scholar developed innovative methodologies, approaches or solutions?
- Has the practice-oriented scholar's work advanced the research goals and education of other practitioners, faculty, researchers or students?
- Does the practice-oriented scholar take part in outside or professional practice advisory or review groups from peer institutions?
- Has the practice-oriented scholar achieved recognition, such as awards and lectureships, for achievements in practice work?
- Has the practice-oriented scholar been invited to present work in external venues, including conferences outside his or her discipline (for example, an epidemiologist presenting at a climate conference on health effects of climate change or a public policy expert giving a presentation to environmental scientists)?
- Has the practice-oriented scholar engaged in advanced problem-solving for the public good?
- Are the results of the practice-oriented scholar's research cited widely and/or in multiple disciplines?
- Has the practice-oriented scholar's work been implemented? If so, has the implementation been evaluated? Has the implementation and/or evaluation advanced the research outcomes of the practice work?
- Has the practice-oriented scholar worked with clients and if so what were the assessments of the clients?
- Has the practice-oriented scholar raised or received funding for field or practice work?
- Has the practice-oriented scholar demonstrated leadership by being the principal investigator in a practice-oriented project?

Earth Institute Joint Appointments

The Earth Institute provides for the joint appointment of researchers and scholars who regularly make significant contributions to a research center or unit other than the one with which they are primarily affiliated.

The process for making a joint appointment within the Earth Institute is as follows:

The directors of the respective research centers or units nominate a candidate for a joint appointment to the Appointments Committee of the Earth Institute faculty. The nomination entails a nomination letter, signed by the respective research center directors, which details the reasons and the merits of the proposed joint appointment, as well as a Memorandum of Agreement (MOA), which would be signed by the candidate, the directors, the Director or Executive Director of the Earth Institute, and the Chair of the Appointments Committee. (See Appendix A12 for a template of the MOA.)

Candidates who hold joint appointments adhere to the Earth Institute's standard annual performance evaluation process by completing the Research Staff Appraisal form and participating in the Assessment Interview. The completed form is signed by the respective research center or unit directors.

APPENDIX A: PROFESSIONAL OFFICERS OF RESEARCH

Appendix A1: Characteristic Performance Standards for Professional Officers of Research

This appendix includes simplified tables that are meant to give a general overview of basic expectations for Professional Officers of Research appointed in the Earth Institute. The Earth Institute includes a diverse and complex collection of research units ranging from those devoted to basic scientific research to others focused on applied and even clinical tasks. While the Earth Institute standards expressed in these guidelines, (and summarized in the first table that follows) will be applied to all appointment and promotion cases, some Earth Institute research centers have included more specific tables for reference in this appendix. For appointment and promotion cases in those units, the Appointments Committee of the Earth Institute will refer to the standards outlined in that unit's table, below. For all other Earth Institute units, the Appointments Committee will refer to the Earth Institute table for all units.

Overall standards of Quality/Excellence

- **Associate Research Scientist/Scholar (ARS):** Expected to be recognized as having potential to perform at the highest levels of quality and excellence in research and/or education.
- **Research Scientist/Scholar (RS)** Expected to be recognized as performing at the highest levels of quality and excellence in research and/or education.
- **Senior Research Scientist/ Scholar (SRS)** Expected to be recognized as performing at world-class levels of quality and excellence. Exhibits strong leadership skills.

	Associate Research Scientist/ Scholar (ARS)	Research Scientist/ Scholar (RS)	Senior Research Scientist/ Scholar (SRS)
Qualifications/ Experience	PhD or equivalent training in discipline of relevance to the Unit mission. Two years post-PhD relevant experience is normally required but in extraordinary circumstances this requirement may be waived. Demonstrates	Six years successful experience, or the achievement equivalent, at ARS level. Strong ability to develop new skills and knowledge. Demonstrates capability to lead and complete complex tasks. National reputation.	At least three years successful experience, or the achievement equivalent, at RS level. Wide range of experience at a leadership level in research and projects relevant to the Unit, covering all features - science, organization and communication. Top of

	willingness and ability to learn new skills and topics. Able to set and complete own project tasks.		field.
Knowledge	Sound knowledge at PhD level of scientific discipline of relevance to the Unit mission. Able to comprehend and convey ideas clearly in writing and orally. Contributes to meetings, seminars and workshops in and outside of Unit.	Deep knowledge of range of relevant subjects, and widely recognized expertise. Interprets and conveys ideas clearly and proficiently in writing and orally. Coordinates and contributes to meetings, seminars, and workshops in and outside of Unit.	Extensive knowledge and intellectual leadership relevant to the Unit's mission. Excellent communicator in writing and orally. Internationally recognized expertise. Plans and manages meetings, seminars, and workshops within and outside of Unit.
Unit Mission	Understands and supports general Unit mission and goals. Aligns work toward Unit goals. Assists with development of projects in support of the Unit mission. Represents Unit mission in public presentations.	Has detailed knowledge of Unit's mission. Develops projects in support of the Unit mission. Represents, discusses, defends, promotes Unit mission in any forum.	Has in-depth knowledge of Unit's mission and contributes to its evolution. Develops policy and programs in support of the Unit mission. Represents and promotes Unit mission at highest levels and among staff.
Projects	Promotes project concepts and assists in project design. Meets assigned project goals and outputs. Demonstrates common sense and reliability in work tasks. Organizes own time well. Able to work without day-to-day supervision.	Promotes and develops project designs, plans and supervises projects. Meets project goals and outputs. Works independently, with minimal supervision; organizes own time effectively. Assumes leading role in major aspects of some projects.	Defines project strategies to meet the Unit's overall goals. Develops and manages portfolios of projects and large-scale or complex projects. Leads projects design processes and delegates functions and responsibilities.
Collaboration/ Mentoring	Able to work effectively as a team member within and outside of the Unit. Shares skills and knowledge for the benefit of the group effort. May play key role in some collaborative projects.	Promotes, leads and actively participates in, group projects extending beyond the Unit. Shares skills and knowledge for the benefit of the group effort, and encourages this in others. Provides assistance and supervision in development of other staff members.	Promotes, plans and leads international collaborations. Encourages a high level of teamwork throughout the Unit. Supports and guides other staff in their careers. Provides high quality intellectual leadership and guidance.
Innovation	Shows inventiveness and resourcefulness in carrying out project tasks and helping design projects. Seeks creative	Creative in designing and completing research and other projects, and in solving problems. Author's original work in	Innovative in all aspects of Unit activity. Proactive in preventing, and creative in solving, difficult problems within

	solutions to scientific and project challenges. Writes original papers for refereed and informal publications.	quality refereed and informal publications. Sought out by others to assist with difficult problems. Innovative in collaboration, technology, organization, Unit objectives, use of resources.	complex projects. Designs innovative and significant project plans. Extends and/or challenges established beliefs or practices. Author's original work in top refereed and informal publications. Sought out by leading individuals and institutions for advice on difficult problems.
Resources	Assists in, and may propose, acquiring external project funding or in-kind support.	Initiates and leads in the soliciting of external project funding or in-kind support.	Creates opportunities for, and manages, acquisition of significant external project funding or in-kind support.

Center for Environmental Research and Conservation (CERC) Characteristic Performance Standards for Professional Officers of Research

Overall standards of Quality/Excellence

- **Associate Research Scientist/Scholar (ARS):** Expected to be recognized as having potential to perform at the highest levels of quality and excellence in research and/or education.
- **Research Scientist/Scholar (RS)** Expected to be recognized as performing at the highest levels of quality and excellence in research and/or education.
- **Senior Research Scientist/ Scholar (SRS)** Expected to be recognized as performing at world-class levels of quality and excellence. Exhibits strong leadership skills.

	Associate Research Scientist/ Scholar (ARS)	Research Scientist/ Scholar (RS)	Senior Research Scientist/ Scholar (SRS)
Qualifications/ Experience	PhD or equivalent training in discipline of relevance to the Unit mission. Two years post-PhD relevant experience is normally required but in extraordinary circumstances this requirement may be waived. Demonstrates willingness and ability to learn new skills and topics. Able to set and complete own project tasks.	Six years successful experience, or the achievement equivalent, at ARS level. Strong ability to develop new skills and knowledge. Demonstrates capability to lead and complete complex tasks. National reputation.	At least three years successful experience, or the achievement equivalent, at RS level. Wide range of experience at a leadership level in research and projects relevant to the Unit, covering all features - science, organization and communication. Top of field.
Knowledge	Sound knowledge at PhD level of scientific discipline of relevance to the Unit mission. Able to comprehend and convey ideas clearly in writing and orally. Contributes to meetings, seminars and workshops in and outside of Unit.	Deep knowledge of range of relevant subjects, and widely recognized expertise. Interprets and conveys ideas clearly and proficiently in writing and orally. Coordinates and contributes to meetings, seminars, and workshops in and outside of Unit.	Extensive knowledge and intellectual leadership relevant to the Unit's mission. Excellent communicator in writing and orally. Internationally recognized expertise. Plans and manages meetings, seminars, and workshops within and outside of Unit.
Unit Mission	Understands and supports general Unit mission and goals.	Has detailed knowledge of Unit's mission. Develops projects in	Has in-depth knowledge of Unit's mission and contributes to its

	Aligns work toward Unit goals. Assists with development of projects in support of the Unit mission. Represents Unit mission in public presentations.	support of the Unit mission. Represents, discusses, defends, promotes Unit mission in any forum.	evolution. Develops policy and programs in support of the Unit mission. Represents and promotes Unit mission at highest levels and among staff.
Projects	Promotes project concepts and assists in project design. Meets assigned project goals and outputs. Demonstrates common sense and reliability in work tasks. Organizes own time well. Able to work without day-to-day supervision.	Promotes and develops project designs, plans and supervises projects. Meets project goals and outputs. Works independently, with minimal supervision; organizes own time effectively. Assumes leading role in major aspects of some projects.	Defines project strategies to meet the Unit's overall goals. Develops and manages portfolios of projects and large-scale or complex projects. Leads projects design processes and delegates functions and responsibilities.
Collaboration/ Mentoring	Able to work effectively as a team member within and outside of the Unit. Shares skills and knowledge for the benefit of the group effort. May play key role in some collaborative projects.	Promotes, leads and actively participates in, group projects extending beyond the Unit. Shares skills and knowledge for the benefit of the group effort, and encourages this in others. Provides assistance and supervision in development of other staff members.	Promotes, plans and leads international collaborations. Encourages a high level of teamwork throughout the Unit. Supports and guides other staff in their careers. Provides high quality intellectual leadership and guidance.
Innovation	Shows inventiveness and resourcefulness in carrying out project tasks and helping design projects. Seeks creative solutions to scientific and project challenges. Writes original papers for refereed and informal publications.	Creative in designing and completing research and other projects, and in solving problems. Author's original work in quality refereed and informal publications. Sought out by others to assist with difficult problems. Innovative in collaboration, technology, organization, Unit objectives, use of resources.	Innovative in all aspects of Unit activity. Proactive in preventing, and creative in solving, difficult problems within complex projects. Designs innovative and significant project plans. Extends and/or challenges established beliefs or practices. Author's original work in top refereed and informal publications. Sought out by leading individuals and institutions for advice on difficult problems.
Resources	Assists in, and may propose, acquiring external project funding or in-kind support.	Initiates and leads in the soliciting of external project funding or in-kind support.	Creates opportunities for, and manages, acquisition of significant external project funding or in-kind support.

Center for Global Health and Economic Development (CGHED) Characteristic Performance Standards for Professional Officers of Research

Overall standards of Quality/Excellence

- **Associate Research Scientist/Scholar (ARS):** Expected to be recognized as having potential to perform at the highest levels of quality and excellence in research and/or education.
- **Research Scientist/Scholar (RS)** Expected to be recognized as performing at the highest levels of quality and excellence in research and/or education.
- **Senior Research Scientist/ Scholar (SRS)** Expected to be recognized as performing at world-class levels of quality and excellence. Exhibits strong leadership skills.

	Associate Research Scientist/ Scholar (ARS)	Research Scientist/ Scholar (RS)	Senior Research Scientist/ Scholar (SRS)
Qualifications/ Experience	<p>PhD or advanced Medical or MPH degree. Two years post-PhD scientific experience, or clinical or operational research experience is normally required but in extraordinary circumstances this requirement may be waived.</p> <p>Demonstrates willingness and ability to learn new skills and topics. Able to set and complete own project tasks.</p>	<p>Six years successful experience, or the achievement equivalent, at ARS level. Strong ability to develop new skills and knowledge. Demonstrates capability to lead and complete complex tasks. National reputation.</p>	<p>At least three years successful experience, or the achievement equivalent, at RS level. Wide range of experience at a leadership level in research and projects relevant to the Unit, covering all features - science, organization and communication. Top of field.</p>
Knowledge	<p>Knowledge at PhD level or equivalent of scientific discipline of relevance to the Unit mission. Able to comprehend and convey ideas clearly in writing and orally. Contributes to meetings, seminars and workshops in and outside of Unit.</p>	<p>Deep knowledge of range of relevant subjects, and widely recognized expertise. Interprets and conveys ideas clearly and proficiently in writing and orally. Coordinates and contributes to meetings, seminars, and workshops in and outside of Unit.</p>	<p>Extensive knowledge and intellectual leadership relevant to the Unit's mission. Excellent communicator in writing and orally. Internationally recognized expertise. Plans and manages meetings, seminars, and workshops within and outside of Unit.</p>
Unit Mission	<p>Understands and supports general Unit</p>	<p>Has detailed knowledge of Unit's mission.</p>	<p>Has in-depth knowledge of Unit's mission and</p>

	mission and goals. Aligns work toward Unit goals. Assists with development of projects in support of the Unit mission. Represents Unit mission in public presentations.	Develops projects in support of the Unit mission. Represents, discusses, defends, promotes Unit mission in any forum.	contributes to its evolution. Develops policy and programs in support of the Unit mission. Represents and promotes Unit mission at highest levels and among staff.
Projects	Promotes project concepts and assists in project design. Meets assigned project goals and outputs. Demonstrates common sense and reliability in work tasks. Organizes own time well. Able to work without day-to-day supervision.	Promotes and develops project designs, plans and supervises projects. Meets project goals and outputs. Works independently, with minimal supervision; organizes own time effectively. Assumes leading role in major aspects of some projects.	Defines project strategies to meet the Unit's overall goals. Develops and manages portfolios of projects and large-scale or complex projects. Leads projects design processes and delegates functions and responsibilities.
Collaboration/ Mentoring	Able to work effectively as a team member within and outside of the Unit. Shares skills and knowledge for the benefit of the group effort. May play key role in some collaborative projects.	Promotes, leads and actively participates in, group projects extending beyond the Unit. Shares skills and knowledge for the benefit of the group effort, and encourages this in others. Provides assistance and supervision in development of other staff members.	Promotes, plans and leads international collaborations. Encourages a high level of teamwork throughout the Unit. Supports and guides other staff in their careers. Provides high quality intellectual leadership and guidance.
Innovation	Shows inventiveness and resourcefulness in carrying out project tasks and helping design projects. Seeks creative solutions to scientific and project challenges. Writes original papers for refereed and informal publications.	Creative in designing and completing research and other projects, and in solving problems. Author's original work in quality refereed and informal publications. Sought out by others to assist with difficult problems. Innovative in collaboration, technology, organization, Unit objectives, use of resources.	Innovative in all aspects of Unit activity. Proactive in preventing, and creative in solving, difficult problems within complex projects. Designs innovative and significant project plans. Extends and/or challenges established beliefs or practices. Author's original work in top refereed and informal publications. Sought out by leading individuals and institutions for advice on difficult problems.
Resources	Assists in, and may propose, acquiring external project funding or in-kind support.	Initiates and leads in the soliciting of external project funding or in-kind support.	Creates opportunities for, and manages, acquisition of significant external project funding or in-kind support.

**Center for International Earth Science Information Network (CIESIN)
Characteristic Performance Standards for Professional Officers of Research**

Overall standards of Quality/Excellence

- **Associate Research Scientist/Scholar (ARS):** Expected to be recognized as having potential to perform at the highest levels of quality and excellence in a) disciplinary or interdisciplinary research; b) data and information resource development; and/or c) their application to real-world problems.
- **Research Scientist/Scholar (RS)** Expected to be recognized as performing at the highest levels of quality and excellence in a) disciplinary or interdisciplinary research; b) data and information resource development; and/or c) their application to real-world problems.
- **Senior Research Scientist/ Scholar (SRS)** Expected to be recognized as performing at world-class levels of quality and excellence in a) disciplinary or interdisciplinary research; b) data and information resource development; and/or c) their application to real-world problems. Exhibits exceptional leadership skills.

	Associate Research Scientist/ Scholar (ARS)	Research Scientist/ Scholar (RS)	Senior Research Scientist/ Scholar (SRS)
Qualifications/ Experience	PhD or equivalent training in discipline of relevance to the Unit mission. Two years post-PhD relevant experience is normally required but in extraordinary circumstances this requirement may be waived. Demonstrates willingness and ability to learn new skills and topics. Able to set and complete own project tasks.	Six years successful experience, or the achievement equivalent, at ARS level. Strong ability to develop new skills and knowledge. Demonstrates capability to lead and complete complex tasks. National or international reputation.	At least three years successful experience, or the achievement equivalent, at RS level. Wide range of experience at a leadership level in research and projects relevant to the Unit, covering all features - science, data and information management, organization and communication. Top of field.
Knowledge	Sound knowledge at PhD level of scientific discipline or interdisciplinary area of relevance to the Unit mission. Able to comprehend and convey ideas clearly in writing and orally. Contributes to meetings, seminars and workshops in and	Deep knowledge of range of relevant subjects, and widely recognized expertise. Interprets and conveys ideas clearly and proficiently in writing and orally. Coordinates, plans, and manages meetings, seminars, and workshops in and outside of Unit.	Extensive knowledge and intellectual leadership relevant to the Unit's mission. Excellent communicator in writing and orally. Internationally recognized expertise. Initiates and organizes meetings, seminars, and workshops within and outside of Unit.

	outside of Unit.		
Unit Mission	Understands and supports general Unit mission and goals. Aligns work toward Unit goals. Assists with development of projects in support of the Unit mission. Represents Unit mission in public presentations.	Has detailed knowledge of Unit's mission. Develops projects in support of the Unit mission. Represents, discusses, defends, promotes Unit mission in any forum.	Has in-depth knowledge of Unit's mission and contributes to its evolution. Develops policy and programs in support of the Unit mission. Represents and promotes Unit mission at highest levels and among staff.
Projects	Promotes project concepts and assists in project design. Meets assigned project goals and outputs. Demonstrates common sense and reliability in work tasks. Organizes own time well. Able to work without day-to-day supervision.	Promotes and develops project designs, plans and supervises projects. Meets project goals and outputs. Works independently, with minimal supervision; organizes own time effectively. Assumes leading role in major aspects of some projects.	Defines project strategies to meet the Unit's overall goals. Develops and manages portfolios of projects and large-scale or complex projects. Leads projects design processes and delegates functions and responsibilities.
Collaboration/ Mentoring	Able to work effectively as a team member within and outside of the Unit. Shares skills and knowledge for the benefit of the group effort. May play key role in some collaborative projects.	Promotes, leads and actively participates in, group projects extending beyond the Unit. Shares skills and knowledge for the benefit of the group effort, and encourages this in others. Provides assistance and supervision in development of other staff members.	Promotes, plans and leads national or international collaborations. Encourages a high level of teamwork throughout the Unit. Supports and guides other staff in their careers. Provides high quality intellectual leadership and guidance.
Innovation	Shows inventiveness and resourcefulness in carrying out project tasks and helping design projects and/or data and information resources. Seeks creative solutions to scientific, project, and data management challenges. Writes original papers for refereed and informal publications or helps prepare, develop, and apply unique data and information resources.	Creative in designing and completing research, data development, and other projects, and in solving problems. Author's original work in quality refereed and informal publications or leads preparation and application of unique data and information resources. Sought out by others to assist with difficult problems. Innovative in collaboration, technology, organization, informatics, Unit objectives, use of resources.	Innovative in all aspects of Unit activity. Proactive in preventing, and creative in solving, difficult problems within complex projects. Designs innovative and significant project plans and data and information resources. Extends and/or challenges established beliefs or practices. Authors original work in top refereed and informal publications or manages development and application of unique data and information resources. Sought out by

			leading individuals and institutions for advice on difficult problems.
Resources	Assists in, and may propose, acquiring external project funding or in-kind support.	Initiates and leads in the soliciting of external project funding or in-kind support.	Creates opportunities for, and manages, acquisition of significant external project funding or in-kind support.

Center for International Earth Science Information Network (CIESIN) Characteristics of Practice-Oriented Scholarship

Practice-oriented scholarship at the Center for International Earth Science Information Network (CIESIN) is important to the mission of the Center. The following categories describe the primary types of practice work pursued at CIESIN. Professional Officers of Research whose work falls into these categories may be considered practice-oriented scholars and may be subject to the guidelines for Appointment and Promotion of Practice-Oriented Scholars.

Categories of practice work at CIESIN	Goals	Outputs	Examples
Demonstration projects	<ul style="list-style-type: none"> -Piloting innovations in interdisciplinary scientific data development and their application -Institutional and policy analysis -Partnership and network development -Capacity building and infrastructure development -Cross-disciplinary approaches to problem solving 	<ul style="list-style-type: none"> -new datasets, databases, and data collections -prototypes or proof of concepts for analytic, visualization, and decision support tools -new standards or implementations of standards -technical reports -scientific publications -pilot funding and in-kind support 	<ul style="list-style-type: none"> -Environmental indicators -Global Natural Disaster Risk Hotspots study & data -Polar Information Commons project & launch -Global roads data development projects -Group on Earth Observations Architecture Implementation Pilots -Open Geospatial Consortium testbeds & pilots
Information system development and implementation	<ul style="list-style-type: none"> -Developing and implementing working data and information systems to support decision making on sustainable development -Implementation of standards in operational systems 	<ul style="list-style-type: none"> -databases and information systems -online visualization and analysis services -standards-compliant spatial data services -node of distributed network -working policies and procedures -technical reports and documentation -usage metrics 	<ul style="list-style-type: none"> -NASA Socioeconomic Data and Applications Center -Northeast Information Node of the National Biological Information Infrastructure -Millennium Villages Information System -African Soil Information Service cyberinfrastructure - Global Earthquake Model project -Geospatial Preservation Resource Center
Theme-based training/tools projects	<ul style="list-style-type: none"> -Development and use of training curricula -Advancement and transfer of products and tools 	<ul style="list-style-type: none"> -teaching tools -web-based resources, videos -training courses, sessions, labs and materials and syllabi -distance learning activities 	<ul style="list-style-type: none"> -Spatial data integration and GIS training and materials -<i>TerraViva!</i> SEDAC tool and YouTube tutorials -InterAmerican Institute for Global Change workshops -IRI Summer Institutes

		<ul style="list-style-type: none"> -cyberseminars -guest lectures, talks 	<ul style="list-style-type: none"> -Population Environment Research Network cyberseminars
Outreach projects	<ul style="list-style-type: none"> -Knowledge management and policy development -Partner engagement -Case studies 	<ul style="list-style-type: none"> -outreach publications, editorials -lasting collaborations, agreements -mapping/visualization tools and resources -briefings, workshops -Creative Commons licensed maps, graphics 	<ul style="list-style-type: none"> -<i>Where the Poor Are: An Atlas of Poverty</i> -invasive species mapper -Jamaica Bay bioblitz -maps and data used by <i>National Geographic</i>, the <i>New York Times</i>, <i>Nature</i>, CNN -briefings for NRC committees and other groups
Advisory and technical support projects	<ul style="list-style-type: none"> -Advising organizations or government agencies, or providing technical support to bring science based information and practices into development programs/projects 	<ul style="list-style-type: none"> -scientific & policy-oriented reports -contributions to international assessment reports -application of policy-relevant data and information resources -recommended policies -policy briefs and briefings -evaluation reports 	<ul style="list-style-type: none"> -Haiti Regeneration Initiative -Group on Earth Observations Data Sharing Task Force, draft guidelines, and white paper -support for UNEP Global Environmental Outlook -support for IPCC assessments -participation in Political Instability Task Force -environment-security studies

Center for Research on Environmental Decisions (CRED) Characteristic Performance Standards for Professional Officers of Research

Overall standards of Quality/Excellence

- **Associate Research Scientist/Scholar (ARS):** Expected to be recognized as having potential to perform at the highest levels of quality and excellence in research and/or education.
- **Research Scientist/Scholar (RS)** Expected to be recognized as performing at the highest levels of quality and excellence in research and/or education.
- **Senior Research Scientist/ Scholar (SRS)** Expected to be recognized as performing at world-class levels of quality and excellence. Exhibits strong leadership skills.

	Associate Research Scientist/ Scholar (ARS)	Research Scientist/ Scholar (RS)	Senior Research Scientist/ Scholar (SRS)
Qualifications/ Experience	PhD or equivalent training plus 2 years additional scientific experience. Interdisciplinary orientation vis-à-vis both social and natural sciences.	Six years successful experience, or the achievement equivalent, at ARS level. Strong ability to develop new skills and knowledge. Demonstrates capability to lead and complete complex tasks. Strong favorable recognition by other EI units and by researchers outside Columbia.	At least three years successful experience, or the achievement equivalent, at RS level. Wide range of experience at a leadership level in CRED projects. Recognized as a leading contributor within EI and internationally.
Knowledge	Sound knowledge at PhD level of scientific discipline of relevance to the Unit mission. Able to comprehend and convey ideas clearly in writing and orally. Contributes to meetings, seminars and workshops in and outside of Unit.	Deep knowledge of range of relevant subjects, and widely recognized expertise. Interprets and conveys ideas clearly and proficiently in writing and orally. Coordinates and contributes to meetings, seminars, and workshops in and outside of Unit.	Extensive knowledge and intellectual leadership relevant to the Unit's mission. Excellent communicator in writing and orally. Internationally recognized expertise. Plans and manages meetings, seminars, and workshops within and outside of Unit.
Unit Mission	Understands and supports general Unit mission and goals. Aligns work toward Unit goals. Assists with development of projects in support of the Unit	Has detailed knowledge of Unit's mission. Develops projects in support of the Unit mission. Represents, discusses, defends, promotes Unit mission in	Has in-depth knowledge of Unit's mission and contributes to its evolution. Develops policy and programs in support of the Unit mission. Represents and

	mission. Represents Unit mission in public presentations.	any forum.	promotes Unit mission at highest levels and among staff.
Projects	Promotes project concepts and assists in project design. Meets assigned project goals and outputs. Demonstrates common sense and reliability in work tasks. Organizes own time well. Able to work without day-to-day supervision.	Promotes and develops project designs, plans and supervises projects. Meets project goals and outputs. Works independently, with minimal supervision; organizes own time effectively. Assumes leading role in major aspects of some projects.	Defines project strategies to meet the Unit's overall goals. Develops and manages portfolios of projects and large-scale or complex projects. Leads projects design processes and delegates functions and responsibilities.
Collaboration/ Mentoring	Able to work effectively as a team member within and outside CRED. Plays key role in some collaborative projects.	Provides assistance, supervision and mentorship to others.	Promotes, plans and leads collaborations. Supports and guides other staff in their careers.
Innovation	Shows inventiveness and resourcefulness in carrying out project tasks and helping design projects. Seeks creative solutions to scientific and project challenges. Writes original papers for refereed and informal publications.	Creative in designing and completing research and other projects, and in solving problems. Author's original work in quality refereed and informal publications. Sought out by others to assist with difficult problems. Innovative in collaboration, technology, organization, Unit objectives, use of resources.	Innovative in all aspects of Unit activity. Proactive in preventing, and creative in solving, difficult problems within complex projects. Designs innovative and significant project plans. Extends and/or challenges established beliefs or practices. Author's original work in top refereed and informal publications. Sought out by leading individuals and institutions for advice on difficult problems.
Resources	Assists in, and may propose, acquiring external project funding or in-kind support.	Initiates and leads in the soliciting of external project funding or in-kind support.	Creates opportunities for, and manages, acquisition of significant external project funding or in-kind support.

Center for Research on Environmental Decisions (CRED) Characteristics of Practice-Oriented Scholarship

Practice-oriented scholarship at the Center for Research on Environmental Decisions (CRED) is important to the mission of the Center. The following categories describe the primary types of practice work pursued at CRED. Professional Officers of Research whose work falls into these categories may be considered practice-oriented scholars and may be subject to the guidelines for Appointment and Promotion of Practice-Oriented Scholars.

Categories of practice work at CRED	Goals	Outputs	Examples
Demonstration projects	<ul style="list-style-type: none"> -Piloting innovations in environmental decision making These innovations require -Tool assessment -Institutional and policy analysis -Partnership and network development -Capacity building and infrastructure development -Cross-disciplinary approaches to problem solving 	<ul style="list-style-type: none"> -prototypes or proof of concepts for information processing , visualization, and decision support tools -new standards or implementations of standards -technical reports -scientific publications -pilot funding and in-kind support 	<ul style="list-style-type: none"> -Climate Index Insurance for Agriculture -Institutional landscape and decision processes in water management in Chile - UNEP/EI Haiti Cod Sur Initiative to promote human health and resilient ecosystem management -IFRC Climate Centre projects in Tanzania, Kenya, Indonesia -Art and climate science collaboration projects
Theme-based training/tools projects	<ul style="list-style-type: none"> -Development and use of training curricula and tools -Transfer of products and tools to new settings 	<ul style="list-style-type: none"> -educational tools -web-based resources, videos -training courses, sessions, labs, materials, and syllabi -distance learning activities -cyberseminars -guest lectures, talks 	<ul style="list-style-type: none"> -Workshop on climate change communication with The Nature Conservancy -Workshop on decision making with AACREA (leading agricultural NGO in Argentina) - <i>Environmental Decision Making</i> (textbook) -Serve as committee member to develop new MA program at EI
Outreach projects	<ul style="list-style-type: none"> Represent and promote the Center’s mission in off-campus forums Dissemination of information resources and decision support tools This dissemination includes: -Knowledge management -Contribution to policy 	<ul style="list-style-type: none"> -outreach publications, editorials -lasting collaborations, represented in agreements, meeting agendas, communications -briefings, workshops 	<ul style="list-style-type: none"> -Global Roundtable on Climate Change -Partnership with SustainUS (an NGO advancing sustainable development and youth empowerment in the US) - CRED guide <i>The Psychology of Climate Change Communication</i>

Categories of practice work at CRED	Goals	Outputs	Examples
	<ul style="list-style-type: none"> development, including scaling up policy to include larger units or populations -Partner engagement -Case studies 		<ul style="list-style-type: none"> -Partnership with Rose Companies (a green real estate planning, development, and investment firm)
Advisory and technical support projects	<ul style="list-style-type: none"> - Bringing social-science based information and practices into development programs and projects by providing advice or technical support to organizations or government agencies -Advisory role within EI 	<ul style="list-style-type: none"> -scientific and policy-oriented reports -contributions to international assessment reports -recommended policies -policy briefs and briefings -evaluation reports 	<ul style="list-style-type: none"> -WMO Conference work group, Living with Climate Variability and Change -Urban Climate Change Research Network International Symposium -Membership in advisory boards at EI/CU (e.g. CICAR, TFSD)

Center for the Study of Science and Religion (CSSR) Characteristic Performance Standards for Professional Officers of Research

Overall standards of Quality/Excellence

For CSSR, candidates should have either published one or more peer-reviewed articles, demonstrating knowledge of one or more sciences and one or more religious traditions, and guiding the actions of scientists and clergy; or they should have created and sustained a successful grass-roots service organization involving at least one science and at least one religion; or, preferably, both.

- **Associate Research Scientist/Scholar (ARS):** Expected to be recognized as having potential to perform at the highest levels of quality and excellence in research and/or service.
- **Research Scientist/Scholar (RS)** Expected to be recognized as performing at the highest levels of quality and excellence in research and/or service.
- **Senior Research Scientist/ Scholar (SRS)** Expected to be recognized as performing at world-class levels of quality and excellence. Exhibits strong leadership skills.

	Associate Research Scientist/Scholar (ARS)	Research Scientist/Scholar (RS)	Senior Research Scientist/ Scholar (SRS)
Qualifications/Experience The CSSR recognizes that "science and religion" is a new field and therefore expects applicants may have accomplished at least their initial work in either one or the other area. Nevertheless, engagement with both ways of thinking, whether community-based or academic or both, is required.	PhD or equivalent training in discipline of relevance to the CSSR mission. Two years post-PhD relevant experience is normally required but in extraordinary circumstances this requirement may be waived. Demonstrates willingness and ability to learn new skills and topics. Able to set and complete own project tasks.	Six years successful experience, or the achievement equivalent, at ARS level. Strong ability to develop new skills and knowledge. Demonstrates capability to lead and complete complex tasks. National reputation.	At least three years successful experience, or the achievement equivalent, at RS level. Wide range of experience at a leadership level in research and projects relevant to the CSSR, covering all features - science, organization and communication. Top of field.
Knowledge	Sound	Deep knowledge of	Extensive knowledge and

<p>The CSSR expects quantitative skills sufficient to recognize faulty statistical argument, and also sufficient sensitivity and self-awareness to recognize the emotional equivalent, that is, denial of feelings.</p>	<p>knowledge at PhD level of scientific discipline of relevance to the CSSR mission. Able to comprehend and convey ideas clearly in writing and orally. Contributes to meetings, seminars and workshops in and outside of CSSR.</p>	<p>range of relevant subjects, and widely recognized expertise. Interprets and conveys ideas clearly and proficiently in writing and orally. Coordinates and contributes to meetings, seminars, and workshops in and outside of CSSR.</p>	<p>intellectual leadership relevant to the CSSR's mission. Excellent communicator in writing and orally. Internationally recognized expertise. Plans and manages meetings, seminars, and workshops within and outside of CSSR.</p>
<p>CSSR Mission For the CSSR. applicant should articulate and exemplify the notion that the CSSR is a place to study Science AND Religion in order to reduce suffering, and that in terms of the confrontation with sustainability and its challenges, a stance requiring one to win and the other to lose, is fruitless. The research of the CSSR includes therefore considerations of ecological stability and the consequences of natural selection to sustainability, as well as a consideration of how best to convey these and other facts of nature to religious audiences.</p>	<p>Understands and supports general CSSR mission and goals. Aligns work toward CSSR goals. Assists with development of projects in support of the CSSR mission. Represents CSSR mission in public presentations.</p>	<p>Has detailed knowledge of CSSR's mission. Develops projects in support of the CSSR mission. Represents, discusses, defends, promotes CSSR mission in any forum.</p>	<p>Has in-depth knowledge of CSSR's mission and contributes to its evolution. Develops policy and programs in support of the CSSR mission. Represents and promotes CSSR mission at highest levels and among staff.</p>
<p>Projects The CSSR exemplifies the insights of science and religion by operating in a wholeheartedly modest and mutually-supportive way. All scholar/scientists at any rank will be expected to share the work of the CSSR, to take colleagues seriously regardless of rank, and to be willing to admit ignorance or anxiety and to ask for help</p>	<p>Promotes project concepts and assists in project design. Meets assigned project goals and outputs. Demonstrates common sense and reliability in work tasks. Organizes own time well. Able to work without day-</p>	<p>Promotes and develops project designs, plans and supervises projects. Meets project goals and outputs. Works independently, with minimal supervision; organizes own time effectively. Assumes leading role in major aspects of some projects.</p>	<p>Defines project strategies to meet the CSSR's overall goals. Develops and manages portfolios of projects and large-scale or complex projects. Leads projects design processes and delegates functions and responsibilities.</p>

from others when that is the true situation.	to-day supervision.		
<p>Collaboration/ Mentoring Fostering, leading, coordinating and participating in collaborative projects and activities within and outside the CSSR. Assisting colleagues and mentoring. As in #5 above, collaboration and mentoring are the mission of the CSSR, as well as the experimental protocol by which the success of the Center is assessed internally.</p>	Able to work effectively as a team member within and outside of the CSSR. Shares skills and knowledge for the benefit of the group effort. May play key role in some collaborative projects.	Promotes, leads and actively participates in, group projects extending beyond the CSSR. Shares skills and knowledge for the benefit of the group effort, and encourages this in others. Provides assistance and supervision in development of other staff members.	Promotes, plans and leads international collaborations. Encourages a high level of teamwork throughout the CSSR. Supports and guides other staff in their careers. Provides high quality intellectual leadership and guidance.
<p>Innovation The CSSR expects the insights and expertise of its scholar/scientists to be put to the service of others initially and throughout the research period. How that will work best, will be a matter of novelty and innovation in each case. GreenMapping Harlem is a case in point.</p>	Shows inventiveness and resourcefulness in carrying out project tasks and helping design projects. Seeks creative solutions to scientific and project challenges. Writes original papers for refereed and informal publications.	Creative in designing and completing research and other projects, and in solving problems. Author's original work in quality refereed and informal publications. Sought out by others to assist with difficult problems. Innovative in collaboration, technology, organization, CSSR objectives, use of resources.	Innovative in all aspects of CSSR activity. Proactive in preventing, and creative in solving, difficult problems within complex projects. Designs innovative and significant project plans. Extends and/or challenges established beliefs or practices. Author's original work in top refereed and informal publications. Sought out by leading individuals and institutions for advice on difficult problems.
<p>Resources For the CSSR, all PhD-level associates are encouraged, expected and helped at all times to find outside funding for their own work and for the continued support of the CSSR's non-research enterprises, in particular its seminars and its publications on paper and on the web.</p>	Assists in, and may propose, acquiring external project funding or in-kind support.	Initiates and leads in the soliciting of external project funding or in-kind support.	Creates opportunities for, and manages, acquisition of significant external project funding or in-kind support.

Columbia Water Center Characteristic Performance Standards for Professional Officers of Research

Overall standards of Quality/Excellence

- **Associate Research Scientist/Scholar (ARS):** Expected to be recognized as having potential to perform at the highest levels of quality and excellence in research and/or education.
- **Research Scientist/Scholar (RS)** Expected to be recognized as performing at the highest levels of quality and excellence in research and/or education.
- **Senior Research Scientist/ Scholar (SRS)** Expected to be recognized as performing at world-class levels of quality and excellence. Exhibits strong leadership skills.

	Associate Research Scientist/ Scholar (ARS)	Research Scientist/ Scholar (RS)	Senior Research Scientist/ Scholar (SRS)
Qualifications/ Experience	PhD or equivalent training in discipline of relevance to the Unit mission. Two years post-PhD relevant experience is normally required but in extraordinary circumstances this requirement may be waived. Demonstrates willingness and ability to learn new skills and topics. Able to set and complete own project tasks.	Six years successful experience, or the achievement equivalent, at ARS level. Strong ability to develop new skills and knowledge. Demonstrates capability to lead and complete complex tasks. National reputation.	At least three years successful experience, or the achievement equivalent, at RS level. Wide range of experience at a leadership level in research and projects relevant to the Unit, covering all features - science, organization and communication. Top of field.
Knowledge	Sound knowledge at PhD level of scientific discipline of relevance to the Unit mission. Able to comprehend and convey ideas clearly in writing and orally. Contributes to meetings, seminars and workshops in and outside of Unit.	Deep knowledge of range of relevant subjects, and widely recognized expertise. Interprets and conveys ideas clearly and proficiently in writing and orally. Coordinates and contributes to meetings, seminars, and workshops in and outside of Unit.	Extensive knowledge and intellectual leadership relevant to the Unit's mission. Excellent communicator in writing and orally. Internationally recognized expertise. Plans and manages meetings, seminars, and workshops within and outside of Unit.
Unit Mission	Understands and supports general Unit mission and goals. Aligns work toward Unit goals. Assists with	Has detailed knowledge of Unit's mission. Develops projects in support of the Unit mission. Represents, discusses, defends,	Has in-depth knowledge of Unit's mission and contributes to its evolution. Develops policy and programs in

	development of projects in support of the Unit mission. Represents Unit mission in public presentations.	promotes Unit mission in any forum.	support of the Unit mission. Represents and promotes Unit mission at highest levels and among staff.
Projects	Promotes project concepts and assists in project design. Meets assigned project goals and outputs. Demonstrates common sense and reliability in work tasks. Organizes own time well. Able to work without day-to-day supervision.	Promotes and develops project designs, plans and supervises projects. Meets project goals and outputs. Works independently, with minimal supervision; organizes own time effectively. Assumes leading role in major aspects of some projects.	Defines project strategies to meet the Unit's overall goals. Develops and manages portfolios of projects and large-scale or complex projects. Leads projects design processes and delegates functions and responsibilities.
Collaboration/ Mentoring	Able to work effectively as a team member within and outside of the Unit. Shares skills and knowledge for the benefit of the group effort. May play key role in some collaborative projects.	Promotes, leads and actively participates in, group projects extending beyond the Unit. Shares skills and knowledge for the benefit of the group effort, and encourages this in others. Provides assistance and supervision in development of other staff members.	Promotes, plans and leads international collaborations. Encourages a high level of teamwork throughout the Unit. Supports and guides other staff in their careers. Provides high quality intellectual leadership and guidance.
Innovation	Shows inventiveness and resourcefulness in carrying out project tasks and helping design projects. Seeks creative solutions to scientific and project challenges. Writes original papers for refereed and informal publications.	Creative in designing and completing research and other projects, and in solving problems. Author's original work in quality refereed and informal publications. Sought out by others to assist with difficult problems. Innovative in collaboration, technology, organization, Unit objectives, use of resources.	Innovative in all aspects of Unit activity. Proactive in preventing, and creative in solving, difficult problems within complex projects. Designs innovative and significant project plans. Extends and/or challenges established beliefs or practices. Author's original work in top refereed and informal publications. Sought out by leading individuals and institutions for advice on difficult problems.
Resources	Assists in, and may propose, acquiring external project funding or in-kind support.	Initiates and leads in the soliciting of external project funding or in-kind support.	Creates opportunities for, and manages, acquisition of significant external project funding or in-kind support.

International Research Institute for Climate and Society (IRI) Characteristic Performance Standards for Professional Officers of Research

Overall standards of Quality/Excellence

- **Associate Research Scientist/Scholar (ARS):** Expected to be recognized as having potential to perform at the highest levels of quality and excellence in research and/or education.
- **Research Scientist/Scholar (RS)** Expected to be recognized as performing at the highest levels of quality and excellence in research and/or education.
- **Senior Research Scientist/ Scholar (SRS)** Expected to be recognized as performing at world-class levels of quality and excellence. Exhibits strong leadership skills.

	IRI-ARS (Entry level)	IRI-RS (Mid-level)	IRI-SRS (Senior Level)
Qualifications/ Experience	PhD or equivalent training in discipline of relevance to the IRI mission. Two years post-PhD relevant experience is normally required but in extraordinary circumstances this requirement may be waived. Demonstrates willingness and ability to learn new skills and topics. Able to set and complete own project tasks.	Six years successful experience, or the achievement equivalent, at ARS level. Strong ability to develop new skills and knowledge. Demonstrates capability to lead and complete complex tasks.	At least three years successful experience, or the achievement equivalent, at RS level. Wide range of experience at a leadership level in research and projects relevant to the IRI, covering all features - science, organization and communication.
Knowledge	Sound knowledge at PhD level of scientific discipline of relevance to the IRI mission. Able to comprehend and convey ideas clearly in writing and orally. Contributes to meetings, seminars and workshops in and outside of IRI.	Deep knowledge of range of relevant subjects, and widely recognized expertise. Interprets and conveys ideas clearly and proficiently in writing and orally. Coordinates and contributes to meetings, seminars, and workshops in and outside of IRI.	Extensive knowledge and intellectual leadership relevant to the IRI's mission. Excellent communicator in writing and orally. Internationally recognized expertise. Plans and manages meetings, seminars, and workshops within and outside of IRI.
IRI Mission	Understands and supports general IRI missions and goals. Aligns work toward IRI goals. Assists with development of projects in	Has detailed knowledge of IRI's mission. Develops projects in support of the IRI mission. Represents, discusses, defends,	Has in-depth knowledge of IRI's mission and contributes to its evolution. Develops policy and programs in support of the

	support of the IRI mission. Represents IRI mission in public presentations.	promotes IRI mission in any forum.	IRI mission. Represents and promotes IRI mission at highest levels and among IRI staff.
Projects	Promotes project concepts and assists in project design. Meets assigned project goals and outputs. Demonstrates common sense and reliability in work tasks. Organizes own time well. Able to work without day-to-day supervision.	Promotes and develops project designs, plans and supervises projects. Meets project goals and outputs. Works independently, with minimal supervision; organizes own time effectively. Assumes leading role in major aspects of some projects.	Defines project strategies to meet the IRI's overall goals. Develops and manages portfolios of projects and large-scale or complex projects. Leads projects design processes and delegates functions and responsibilities.
Collaboration	Able to work effectively as a team member within and outside of the IRI. Shares skills and knowledge for the benefit of the group effort. May play key role in some collaborative projects.	Promotes, leads and actively participates in, group projects extending beyond the IRI. Shares skills and knowledge for the benefit of the group effort, and encourages this in others. Provides assistance and supervision in development of other staff members.	Promotes, plans and leads international collaborations. Encourages a high level of teamwork throughout the IRI. Supports and guides other staff in their careers. Provides high quality intellectual leadership and guidance.
Innovation	Shows inventiveness and resourcefulness in carrying out project tasks and helping design projects. Seeks creative solutions to scientific and project challenges. Writes original papers for refereed and informal publications.	Creative in designing and completing research and other projects, and in solving problems. Author's original work in quality refereed and informal publications. Sought out by others to assist with difficult problems. Innovative in collaboration, technology, organization, IRI objectives, use of resources.	Innovative in all aspects of IRI activity. Proactive in preventing, and creative in solving, difficult problems within complex projects. Designs innovative and significant project plans. Extends and/or challenges established beliefs or practices. Author's original work in top refereed and informal publications. Sought out by leading individuals and institutions for advice on difficult problems.
Resources	Assists in, and may propose, acquiring external project funding or in-kind support.	Initiates and leads in the soliciting of external project funding or in-kind support.	Creates opportunities for, and manages, acquisition of significant external project funding or in-kind support.

International Research Institute for Climate and Society (IRI) Characteristics of Practice-Oriented Work

Practice-oriented scholarship at the International Research Institute for Climate and Society (IRI) is important to the mission of the Institute. The following categories describe the primary types of practice work pursued at IRI. Professional Officers of Research whose work falls into these categories may be considered practice-oriented scholars and may be subject to the guidelines for Appointment and Promotion of Practice-Oriented Scholars.

Categories of practice work at IRI	Goals	Outputs	Examples
Demonstration projects	<ul style="list-style-type: none"> -Piloting innovations in climate information and risk management practices -Institutional analysis (how institutions work and interface with others in policy and practice) -Partnership development/nurturing -Capacity building 	<ul style="list-style-type: none"> - early-warning products - early action systems - climate and weather monitoring and forecasting tools - decision support tools -funding for preparedness activities - curriculum 	<ul style="list-style-type: none"> -disaster management insurance -water management systems and planning -agriculture/food security advisement - integrated agricultural decision support tool -malaria early warning system -natural resource management strategies
Theme-based training/tools projects	<ul style="list-style-type: none"> -Development and implementation of training curricula -Advancement and transfer of products and tools 	<ul style="list-style-type: none"> -computational tools to integrate data - seasonal climate forecasts -technical reports or evaluations 	<ul style="list-style-type: none"> -Climate and Health Summer Institute -Climate Predictability Tool/training - IRI Data Library/training
Outreach projects	<ul style="list-style-type: none"> -knowledge management and policy development -partner engagement -case studies -Influence on scaled up policies 	<ul style="list-style-type: none"> - publications, including examinations of current case studies - technical advisor synthesis reports -web resources -lasting collaborations represented in meeting agendas or communications 	<ul style="list-style-type: none"> -Climate and Society Publication process - multimedia web features - COP side events - policy dialogues for senior executives, World Bank
Advisory and technical support projects	<ul style="list-style-type: none"> -advising organizations or government agencies, or providing technical support to bring science based information and practices into development programs/projects 	<ul style="list-style-type: none"> -advisory reports -products - Policy white papers - map tools 	<ul style="list-style-type: none"> -Climate help desk for International Fed. Of Red Cross/Red Crescent Societies; -Draft policy for Climate Risk Management at the African Development Bank

Monitoring and Evaluation	-analyzing data -defining endpoints/metrics/targets	-peer reviewed publications - reports -protocols -data sets	Case studies: Climate and Society MA program, water mgt demonstration in Philippines
----------------------------------	--	--	--

Urban Design Lab (UDL) Characteristic Performance Standards for Professional Officers of Research

Overall standards of Quality/Excellence

- **Associate Research Scientist/Scholar (ARS):** Expected to be recognized as having potential to perform at the highest levels of quality and excellence in research and/or education.
- **Research Scientist/Scholar (RS)** Expected to be recognized as performing at the highest levels of quality and excellence in research and/or education.
- **Senior Research Scientist/ Scholar (SRS)** Expected to be recognized as performing at world-class levels of quality and excellence. Exhibits strong leadership skills.

	Associate Research Scientist/ Scholar (ARS)	Research Scientist/ Scholar (RS)	Senior Research Scientist/ Scholar (SRS)
Qualifications/ Experience	<p>PhD or equivalent training in discipline of relevance to the Unit mission. Two years post-PhD relevant experience is normally required but in extraordinary circumstances this requirement may be waived.</p> <p>If no PhD, then M.Arch or MSAUD degree, plus 5 years post-graduate degree professional experience.</p> <p>Demonstrates willingness and ability to learn new skills and topics. Able to set and complete own project tasks. If an Architect, Registered.</p>	<p>Six years successful experience in design, architecture, or engineering –based research, or the professional equivalent (minimum 10 years combined experience). If predominance of experience is professional, has worked as a firm principal or equivalent. Strong ability to develop new skills and knowledge.</p> <p>Demonstrates capability to lead and complete complex tasks.</p> <p>Registered Architect.</p> <p>National reputation.</p>	<p>At least three years successful experience, or the achievement equivalent, at RS level. Wide range of experience at a leadership level in research and projects relevant to the Unit, covering all features - science, organization and communication. Top of field.</p>

Knowledge	Sound academic and professional knowledge at M.Arch or MSAUD level of scientific discipline of relevance to the Unit mission. Able to comprehend and convey ideas clearly in writing and orally. Contributes to meetings, seminars and workshops in and outside of Unit. Professional knowledge extends to wide range of experience in all stages of building / site layout, design and construction.	Deep knowledge of range of relevant subjects, and widely recognized expertise. Interprets and conveys ideas clearly and proficiently in writing and orally. Coordinates and contributes to meetings, seminars, and workshops in and outside of Unit.	Extensive knowledge and intellectual leadership relevant to the Unit's mission. Excellent communicator in writing and orally. Internationally recognized expertise. Plans and manages meetings, seminars, and workshops within and outside of Unit.
Unit Mission	Understands and supports general Unit mission and goals. Aligns work toward Unit goals. Assists with development of projects in support of the Unit mission. Represents Unit mission in public presentations.	Has detailed knowledge of Unit's mission. Develops projects in support of the Unit mission. Represents, discusses, defends, promotes Unit mission in any forum.	Has in-depth knowledge of Unit's mission and contributes to its evolution. Develops policy and programs in support of the Unit mission. Represents and promotes Unit mission at highest levels and among staff.
Projects	Promotes project concepts and assists in project design. Meets assigned project goals and outputs. Demonstrates common sense and reliability in work tasks. Organizes own time well. Able to work without day-to-day supervision.	Promotes and develops project designs, plans and supervises projects. Meets project goals and outputs. Works independently, with minimal supervision; organizes own time effectively. Assumes leading role in major aspects of some projects.	Defines project strategies to meet the Unit's overall goals. Develops and manages portfolios of projects and large-scale or complex projects. Leads projects design processes and delegates functions and responsibilities.
Collaboration/ Mentoring	Able to work effectively as a team member within and outside of the Unit. Shares skills and knowledge for the benefit of the group effort. May play key role in some collaborative projects.	Promotes, leads, and actively participates in group projects extending beyond the Unit. Shares skills and knowledge for the benefit of the group effort, and encourages this in others. Provides assistance and supervision in development of other staff members.	Promotes, plans and leads international collaborations. Encourages a high level of teamwork throughout the Unit. Supports and guides other staff in their careers. Provides high quality intellectual leadership and guidance.
Innovation	Shows inventiveness and resourcefulness in carrying out project	Creative in designing and completing research and other projects, and in	Innovative in all aspects of Unit activity. Proactive in preventing, and

	tasks and helping design projects. Seeks creative solutions to scientific and project challenges. Writes original papers for refereed and informal publications.	solving problems. Author's original work in quality refereed and informal publications. Sought out by others to assist with difficult problems. Innovative in collaboration, technology, organization, Unit objectives, use of resources.	creative in solving, difficult problems within complex projects. Designs innovative and significant project plans. Extends and/or challenges established beliefs or practices. Author's original work in top refereed and informal publications. Sought out by leading individuals and institutions for advice on difficult problems.
Resources	Assists in, and may propose, acquiring external project funding or in-kind support.	Initiates and leads in the soliciting of external project funding or in-kind support.	Creates opportunities for, and manages, acquisition of significant external project funding or in-kind support.

* The UDL would use the term "Scientist" if appropriate for the specific individual. "Scholar" or "Designer" may be more appropriate for an architect, urban designer, or urban planner.

Appendix A2: Promotion and Appointment to ARS Grade

The procedure for promotion to ARS for salaried PDRS who have received affirmative action clearance in their original appointment, is as follows:

1. A member of Unit Senior Staff nominates the candidate. In the case of a Unit without a member of the Senior Staff, the Unit Director may act in this role. Officers of Administration are not eligible to be considered Senior Staff.
2. A minimum of two seconding letters is required from members holding the rank of ARS or greater or Associate Professor or greater within the Unit, or from the Earth Institute generally if appropriate. Additional seconding letters can come from adjuncts within the Unit.
3. Unit Senior Staff meets to discuss whether to continue the appointment process.
4. At least three letters that address the candidate's qualifications, including two external to the Unit are required. All past and current professional relationships between the letter writers and the candidate must be documented in the file. The recommended letter writers should come from the Unit Director, Promotion Committee, or Senior Staff, and from the candidate. The Appointments Committee must approve the list of external letter writers before the solicitation of any letters, and can request additional or replacement letter writers
5. The Unit Director oversees the compilation of the dossier. The dossier contains a detailed statement of research interests (2-5 pages), a CV, copies of 3 to 5 selected publications, present or pending project participation, and current and pending support. The CV should include any major activities that are unique to the Unit and not part of a traditional academic portfolio, such as public service, outreach, and operational or collaborative activities.
6. The Unit Director appoints a promotion committee that then reviews the file (letters and dossier) and makes a recommendation to the Unit Director. The Unit or Earth Institute staff members who provide nominating and seconding letters may not serve on the promotion committee. The Unit Director should be mindful of close collaborations and conflicts of interest when appointing committee members, especially the chair. All past and current professional relationships between the committee members and the candidate must be documented in the file. If a Unit does not have sufficient senior staff to serve on a promotion committee, the Unit Director may contact the chair of the Appointments Committee for assistance in identifying potential members from outside the Unit or outside the Institute. The Earth Institute provides support in bringing in external promotion committee members as needed.
7. The Unit Director reviews the case and provides a written recommendation and makes a presentation of the case to the Earth Institute Appointments Committee. The Unit Director's recommendation should discuss the significance of the candidate's research or practice in terms that Appointments Committee members, who may not have expertise in that research area, can better understand and evaluate.

8. The Earth Institute Appointments Committee reviews the complete file for the case, including the nomination and seconding letters, letters of recommendation and rationale for the external letter writers selected, the candidate's dossier, the report of the promotion committee, and the Unit Director's recommendation. If the Appointments Committee decides that the promotion is merited, the Committee notifies the Earth Institute faculty and makes a recommendation to the Director or Executive Director of the Earth Institute.
9. The Director or Executive Director of the Earth Institute relays this information and his/her decision to the Unit Director.
10. The Unit Director prepares an offer letter to be approved by Earth Institute Human Resources prior to transmission to the candidate.

The procedure for appointment to ARS for all other cases, including PDRS who have not received affirmative action clearance in their original appointment, is as follows:

1. An advertisement, with job description, is posted in Columbia's RAPS (Recruitment of Academic Personnel System) and externally in at least 3 advertising venues in the specialized field approved by the Provost and AA/EO offices.
2. The Unit Director establishes a search committee, subject to AA/EO guidelines. The search committee should comprise experts in the field most qualified to judge candidates based on the job description. All past and current professional relationships between the committee members and the candidate must be documented in the file. Recommendation letter writers cannot serve on the search committee. If a Unit does not have sufficient senior staff to serve on a search committee, the Unit Director may contact the chair of the Appointments Committee for assistance in identifying potential members from outside the Unit or outside the Earth Institute. The Earth Institute provides support in bringing in external search committee members as needed. Officers of Administration are not eligible to be considered Senior Staff.
3. Search committee reviews applications, once at least five have been obtained, and chooses the candidates for whom the committee will obtain letters of recommendation. At least three letters that address the candidate's qualifications, including at least two external to the Unit are required. All past and current professional relationships between the letter writers and the candidate must be documented in the file. The recommended letter writers should come from the Unit Director, Promotion Committee, or Senior Staff, and the candidate's ranked list of top candidates and recommendations is forwarded to the Unit Director, who may terminate the search at this point. The Unit Director may use standard Earth Institute text for soliciting letters (see Appendices A6 and A8).
4. The search committee chair oversees the interview process.
5. A positive or negative appointment recommendation is sent by the search committee to the Unit Director, documenting the selection process and explaining the rationale for the recommendation.
6. The Unit Director provides a recommendation to the Earth Institute Appointments Committee. The Unit Director's recommendation should discuss the significance of

the candidate's research or practice in terms that Appointments Committee members, who may not have expertise in that research area, could better understand and evaluate.

7. The Earth Institute Appointments Committee reviews the complete file for the case, including the letters of recommendation and rationale for the external letter writers selected, the candidate's dossier, the list of top candidates, the report of the search committee, and the Unit Director's recommendation, and makes a recommendation to the Director or Executive Director of the Earth Institute. The recommendation also notifies the Earth Institute Faculty. The dossier contains a detailed statement of research interests (2-5 pages), a CV, copies of 3 to 5 selected publications, present or pending project participation, and current and pending support. If necessary, the Committee may require additional letters of recommendation at this stage. Appointments Committee members who write recommendation letters or serve on the search committee must recuse themselves from the vote.
8. The Director or Executive Director of the Earth Institute relays this information and his/her decision to the Unit Director.
9. The Unit Director prepares an offer letter to be approved by Earth Institute Human Resources prior to transmission.

Appendix A3: Promotion and Appointment to RS Grade

The procedure for promotion from ARS to RS is as follows:

1. A discussion is held with potential candidate and agreement is reached whether or not to proceed with the promotion process. The candidate has the right to pursue any of the following three options: 1, proceed with promotion; 2, decline promotion process and terminate the ARS appointment at end of the seventh year; 3, in a special circumstance (as described on page 8), transfer to a different career track in which the candidate is better able to serve the Unit.
2. If the decision is made to proceed with the promotion, then any member of the Unit Senior Staff nominates the candidate in September. In the case of a Unit without a member of the Senior Staff, the Unit Director may act in this role. The promotion process will be completed by May of the following year. Officers of Administration are not eligible to be considered Senior Staff.
3. The Unit Director oversees the compilation of the dossier. The dossier contains a detailed statement of research interests (2-5 pages), a CV, copies of 3 to 5 selected publications, present or pending project participation, and current and pending support. The contents of the dossier should include reference to major activities that are unique to the Unit and not part of a traditional academic portfolio, such as public service, outreach, and operational or collaborative activities. The dossier should also include the recommendations from the Mid-Term Review, with a statement by the candidate on how the recommendations from that review were addressed in the work areas.
4. At least two seconding letters are required from among the Unit or Earth Institute Senior Staff (including Adjunct Senior Staff).
5. The Unit Director establishes a promotion committee. The committee should comprise experts in the field most qualified to judge candidates based on the job description. The Unit Director may include members of the Earth Institute from outside the Unit as needed to ensure appropriate coverage of the areas of research contributions. The Unit or Earth Institute Senior Staff members who provide nominating and seconding letters may not serve on the promotion committee. All past and current professional relationships between the committee members and the candidate must be documented in the file. If a Unit does not have sufficient senior staff to serve on a promotion committee, the Unit Director may contact the chair of the Appointments Committee for assistance in identifying potential members from outside the Unit or outside the Institute. The Earth Institute provides support in bringing in external promotion committee members as needed.
6. Candidate provides an open presentation about his/her work that is advertised Earth Institute wide. The promotion committee attends the presentation.
7. Following the presentation, and review of the candidate's dossier, the promotion committee meets to discuss and undertake a confidential signed vote. If the vote outcome is positive (two-thirds), the promotion committee makes a positive

promotion recommendation to the Unit Senior Staff or to the Unit Director if the Unit has no senior staff. If the Unit has Senior Staff, then they meet to discuss the case and make recommendations, which they forward, along with confidential signed votes, to the Unit Director. If the Senior Staff are supportive, by a 2/3 vote, the Unit Director authorizes the promotion committee to compile a list of 12-14 potential outside letter writers that includes a brief rationale for each of the suggested writers. The recommended letter writers should come from the Unit Director, Promotion Committee, or Senior Staff, and from the candidate.

8. . In the event of less than two-thirds support, the case goes directly to the Unit Director, who brings the case before the Earth Institute Appointments Committee for resolution.
9. The promotion committee chair submits a memo to the Earth Institute Appointments Committee, which detail the membership of the promotion committee, the outcome of the vote, the basis for the decision, and the list of suggested external letter writers and rationale for their selection. The Earth Institute Appointments Committee approves the outcome of the promotion committee deliberations and, as appropriate, approves the identities of the outside letter writers.
10. At least 10 letters from sources external to Columbia University are obtained by the Unit Director and made available to the promotion committee and Unit Senior Staff. The Appointments Committee must approve the list of external letter writers before the solicitation of any letters and can request additional or replacement letter writers. The Unit Director may use standard Earth Institute text for soliciting letters by the Earth Institute Appointments Committee (see Appendix A7). The external letter writers are provided a copy of the candidate's dossier and the Earth Institute's and Unit's characteristic performance standards (from Appendix A1). When compiling a list of outside letter writers, individuals should be chosen who have no known bias in the process. Individuals who have had close collaborations with the candidate may be chosen if a case can be made that these individuals bring special knowledge and insight to the evaluation. If this is the case, all past and current professional relationships between the letter writer and the candidate must be documented in the file.
11. The promotion committee makes a positive or negative promotion recommendation to the Unit Director.
12. The Unit Director makes a written promotion recommendation and presents the case to the Earth Institute Appointments Committee, including the nomination and seconding letters, letters of recommendation and rationale for the external letter writers selected, the candidate's dossier, the report of the promotion committee, and the Unit Director's recommendation. The Unit Director's recommendation should discuss the significance of the candidate's research or practice in terms that Appointments Committee members, who may not have expertise in that research area, can best understand and evaluate.
13. If the Earth Institute Appointments Committee deems it cannot appropriately review an appointment, it may, at its discretion, create an ad hoc group to provide additional advice. The Earth Institute Appointments Committee makes a

recommendation to the Earth Institute faculty. Appointments Committee members who write recommendation letters or serve on the promotion committee must recuse themselves from the vote.

14. The Earth Institute faculty votes on the case and makes a recommendation to the Director or Executive Director of the Earth Institute.
15. The Earth Institute Director or Executive Director forwards the recommendation to the Provost.
16. An unsuccessful promotion process at the end of six years active ARS status results in termination of the ARS appointment at the end of the seventh year.
17. If the promotion succeeds, the candidate becomes RS grade effective 1 July. Further promotion is optional.

The procedure for appointment to RS is as follows:

1. An advertisement, with job description, is posted in Columbia's RAPS (Recruitment of Academic Personnel System) and externally in at least 3 advertising venues in the specialized field approved by the Provost and AA/EO offices.
2. The Unit Director establishes a search committee, subject to AA/EO guidelines. The search committee should comprise experts in the field most qualified to judge candidates based on the job description. All past and current professional relationships between the committee members and the candidate must be documented in the file. If a Unit does not have sufficient senior staff to serve on a search committee, the Unit Director may contact the chair of the Appointments Committee for assistance in identifying potential members from outside the Unit or outside the Institute. The Earth Institute provides support in bringing in external search committee members as needed. Officers of Administration are not eligible to be considered Senior Staff.
3. The search committee reviews applications, once at least five have been obtained, and determines for which applicants to seek letters to guide the selection. Recommendation letter writers cannot serve on the search committee.
4. The search committee forwards a ranked list of top candidates and recommendations to interview to the Unit Director, who may terminate the search at this point.
5. The search committee chair oversees the interview process; the final recommendation for hiring is forwarded to the Unit Director along with a list of 12-14 potential outside letter writers that includes a brief rationale for each of the suggested writers. The Unit Director, Promotion Committee, or Senior Staff could identify the letter writers in consultation with the candidate. When compiling a list of outside letter writers, individuals should be chosen who have no known bias in the process. Individuals who have had close collaborations with the candidate may be chosen if a case can be made that these individuals bring special knowledge and insight to the evaluation. If this is the case, all past and current professional relationships between the letter writer and the candidate must be documented in the file.

6. The Unit Director brings the case to the Earth Institute Appointments Committee to approve the outcome of the search committee deliberations and the identities of the outside letter writers.
7. At least 10 letters from sources external to Columbia University are obtained by the Unit Director. The Unit Director may use standard Earth Institute text for soliciting letters by the Earth Institute Appointments Committee (see Appendix A7). The external letter writers are provided a copy of the candidate's dossier and the Earth Institute's and Unit's characteristic performance standards (from Appendix A1).
8. If a Unit has Senior Staff, then they meet to undertake a discussion, with recommendation and confidential signed votes forwarded to the Unit Director. Senior Staff must approve by a 2/3 vote. In cases where there is no Unit Senior Staff, then the Unit Director reviews and determines appointment recommendation.
9. The Unit Director makes a written appointment recommendation and presents the case to the Earth Institute Appointments Committee with the candidate's file, including the letters of recommendation and rationale for the external letter writers selected, the candidate's dossier, the list of top candidates, the report of the search committee, the senior staff vote outcome, and the Unit Director's recommendation. The Unit Director's recommendation should discuss the significance of the candidate's research or practice in terms that Appointments Committee members, who may not have expertise in that research area, can best understand and evaluate. The dossier contains a detailed statement of research interests (2-5 pages), a CV, copies of 3 to 5 selected publications, present or pending project participation, and current and pending support.
10. The Unit Director may request that the Appointments Committee review the case outside of the scheduled meetings.
11. If the Earth Institute Appointments Committee deems it cannot appropriately review an appointment, it may, at its discretion, create an ad hoc group to provide additional advice. The Earth Institute Appointments Committee makes a recommendation to the Earth Institute faculty. Appointments Committee members who write recommendation letters or serve on the search committee must recuse themselves from the vote.
12. The Earth Institute faculty votes on the case and makes a recommendation to the Director or Executive Director of the Earth Institute.
13. The Earth Institute Director or Executive Director forwards the recommendation to the Provost.
14. If appointment succeeds, the Unit Director prepares offer letter to be approved by Earth Institute Human Resources prior to transmission.

Appendix A4: Promotion and Appointment to SRS Grade

Promotion to the SRS Grade is optional; appointment to SRS Grade is rare. It is considered only for research staff that demonstrates outstanding scientific achievement and leadership. Leadership can be demonstrated in a number of ways including senior managerial and organizational roles as well as in intellectual leadership.

The procedure for promotion from RS to SRS is as follows:

1. A candidate is nominated by one or more members of Unit staff who hold rank of SRS or Full Professor. In the case of a Unit without a member of the Senior Staff, the Unit Director may act in this role. Officers of Administration are not eligible to be considered Senior Staff.
2. A discussion is held with potential candidate and agreement is reached whether or not to proceed. This discussion involves the candidate's supervisor, the Unit Director, and if appropriate, the group leader.
3. The Unit Director oversees the compilation of the dossier. The dossier contains a detailed statement of research interests (2-5 pages), a CV, copies of 3 to 5 selected publications, present or pending project participation, and current and pending support. The CV should include major activities that are unique to the Unit and not part of a traditional academic portfolio, such as public service, outreach, and operational or collaborative activities.
4. At least four seconding letters are received from among Unit or Earth Institute staff members who hold rank of SRS or Full Professor (including Adjuncts at that rank).
5. A discussion is held between the Unit Director and members of Unit staff at SRS or Full Professor rank as to whether promotion process should continue. In cases where there is no Unit Senior Staff, then the Unit Director decides whether to continue the promotion process. At least six letters from sources external to Columbia University are obtained by the Unit Director. The Unit Director, Promotion Committee, or Senior Staff could identify the letter writers in consultation with the candidate. When compiling a list of outside letter writers all past and current professional relationships between the letter writer and the candidate must be documented in the file.
6. The recommended letter writers should come from the Unit Director, Promotion Committee, or Senior Staff, and from the candidate. The Appointments Committee must approve the list of external letter writers before the solicitation of any letters, and can request additional or replacement letter writers
7. standard Earth Institute text for soliciting letters (see Appendix A9). The external letter writers are provided a copy of the candidate's dossier and the Earth Institute's and Unit's characteristic performance standards (from Appendix A1). Unit staff holding rank of SRS or Full Professor meet to discuss the case, with recommendation and confidential signed votes forwarded to the Unit Director.

Approval by a 2/3 vote is required. In cases where there is no Unit Senior Staff, then the Unit Director reviews and determines promotion recommendation.

8. The Unit Director makes a written promotion recommendation to the Earth Institute Appointments Committee and provides the candidate's file, including the nomination and seconding letters, letters of recommendation and rationale for the external letter writers selected, the candidate's dossier, the report of the promotion committee, the senior staff vote outcome, and the Unit Director's recommendation. The Unit Director's recommendation should discuss the significance of the candidate's research or practice in terms that Appointments Committee members, who may not have expertise in that research area, could better understand and evaluate.
9. The Earth Institute Appointments Committee approves the outcome of the search committee deliberations and approves the identities of the outside letter writers. Appointments Committee members who write recommendation letters or serve on the promotion committee must recuse themselves from the vote.
10. If the Earth Institute Appointments Committee deems it cannot appropriately review an appointment, it may at its discretion invite additional expertise from within the Earth Institute. The Earth Institute Appointments Committee makes a recommendation to the Earth Institute faculty.
11. The Earth Institute faculty votes on the case and makes a recommendation to the Director or Executive Director of the Earth Institute.
12. The Earth Institute Director or Executive Director forwards the recommendation to the Provost. Upon receipt of approval from the Office of the Provost, the Director or Executive Director informs the Unit Director and requests that the Unit Director make a salary recommendation. Upon salary level approval by the Director or Executive Director, the Unit Director sends an appointment letter to the candidate.

The procedure for appointment to SRS is as follows:

1. An advertisement, with job description, is posted in Columbia's RAPS (Recruitment of Academic Personnel System) and externally in at least 3 advertising venues in the specialized field approved by the Provost and AA/EO offices.
2. The Unit Director establishes a search committee, subject to AA/EO guidelines. The search committee should comprise experts in the field most qualified to judge candidates based on the job description. All past and current professional relationships between the committee members and the candidate must be documented in the file. Recommendation letter writers cannot serve on the search committee. If a Unit does not have sufficient senior staff to serve on a search committee, the Unit Director may contact the chair of the Appointments Committee for assistance in identifying potential members from outside the Unit or outside the Institute. The Earth Institute provides support in bringing in external search committee members as needed. Officers of Administration are not eligible to be considered Senior Staff.

3. The search committee reviews applications, once at least five are obtained, and determine for which applicants to seek letters to guide selection. Search committee chair would solicit those letters.
4. The search committee forwards a ranked list of top candidates and recommendations for who to interview to the Unit Director. The Unit Director may terminate the search at this point.
5. The search committee chair oversees the interview process; a final recommendation for hiring is forwarded to the Unit Director along with a list of 12-14 potential outside letter writers that includes a brief rationale for each of the suggested writers. The recommended letter writers should come from the Unit Director, Promotion Committee, or Senior Staff, and from the candidate. The Appointments Committee must approve the list of external letter writers before the solicitation of any letters, and can request additional or replacement letter writers. All past and current professional relationships between the letter writer and the candidate must be documented in the file.
6. The Earth Institute Appointments Committee approves the outcome of the search committee deliberations and approves the identities of the outside letter writers. T
7. At least 10 letters from sources external to Columbia University are obtained by the Unit Director. The Unit Director may use standard Earth Institute text for soliciting letters by the Earth Institute Appointments Committee (see Appendix A9). The external letter writers are provided a copy of the candidate's dossier and the Earth Institute's and Unit's characteristic performance standards (from Appendix A1).
8. The SRS-rank members (and/or Full Professors) meet to undertake a discussion, with recommendation and confidential signed votes forwarded to the Unit Director. In cases where there is no Unit Senior Staff, then the Unit Director reviews and determines promotion recommendation.
9. The Unit Director makes written appointment recommendation and presents the case to the Earth Institute Appointments Committee, including the letters of recommendation and rationale for the external letter writers selected, the candidate's dossier, the list of top candidates, the report of the search committee, the senior staff vote outcome, and the Unit Director's recommendation. The Unit Director's recommendation should discuss the significance of the candidate's research or practice in terms that Appointments Committee members, who may not have expertise in that research area, can best understand and evaluate. The dossier contains a detailed statement of research interests (2-5 pages), a CV, copies of 3 to 5 selected publications, present or pending project participation, and current and pending support.
10. If the Earth Institute Appointments Committee deems it cannot appropriately review an appointment, it may at its discretion invite additional expertise from within the Earth Institute. The Earth Institute Appointments Committee makes a recommendation to the Earth Institute faculty. Appointments Committee members who write recommendation letters or serve on the search committee must recuse themselves from the vote.
11. The Earth Institute faculty votes on the case and makes a recommendation to the Director or Executive Director of the Earth Institute.

12. The Earth Institute Director or Executive Director forwards the recommendation to the Provost.
13. If appointment succeeds, the Unit Director prepares offer letter to be approved by Earth Institute Human Resources prior to transmission.

Appendix A5: Responsibilities of Practice-Oriented Professional Officers of Research

Incumbent: [NAME]
Title: [POSITION TITLE]
Unit: [UNIT NAME]
Date: [DATE]

Scope of Work

The [TITLE] will report to the Director of the Earth Institute and the Director of [UNIT NAME]. The scope of the [TITLE]'s work will include activities beyond the traditional scope of research responsibilities, including [GENERAL DESCRIPTION OF ACTIVITIES]. *[This section may also include details on collaborators, target audience/client and role in collaborating organizations.]*

Initial Expectations

The [TITLE] is expected to produce the following products and outcomes: [SPECIFY FROM THE FOLLOWING, OR OTHERS: REPORTS, MEMORANDA FOR DECISION MAKERS, AGENDAS FROM MEETINGS OR BRIEFINGS WITH DECISION MAKERS, AND PRESENTATION PACKAGES]

The [TITLE] will devote effort to practice and traditional research outputs and responsibilities. These responsibilities and their relative balance will be discussed with the [TITLE] and the unit director at the beginning of [his/her] appointment in the context of evaluation criteria. Expectations must be documented for midterm and promotion reviews. The Practice Committee and Appointments Committee of the Earth Institute faculty may review documented criteria to ensure that they are appropriate expectations for the Professional Office of Research track and may be met in a promotion review.

Review

The scholar will be subject to the unit review procedures for Professional Officer of Research appointments described in the Guidelines for Earth Institute Research Appointments and Promotions. The criteria for successful performance will include the following questions to judge the scholar's practice work, in addition to the criteria outlined in the guidelines: [SELECT APPLICABLE QUESTIONS FROM THE FOLLOWING LIST]

- Has the practice oriented scholar been engaged in field work on cutting-edge issues of sustainability and advancing the Earth Institute's and the particular unit's mission?

- Is the practice-oriented scholar doing practice work of high quality and reporting on it in leading journals or conferences?
 - If the work is high quality, but is not being reported in leading journals and/or conferences, is it being recorded or otherwise widely shared and reviewed in another legitimate way?
- Has the practice-oriented scholar extended his or her expertise in new directions? For example, has the scholar developed innovative methodologies, approaches or solutions?
- Has the practice-oriented scholar's work advanced the research goals and education of other practitioners, faculty, researchers or students?
- Does the practice-oriented scholar take part in outside or professional practice advisory or review groups from peer institutions?
- Has the practice-oriented scholar achieved recognition, such as awards and lectureships, for achievements in practice work?
- Has the practice-oriented scholar been invited to present work in external venues, including conferences outside his or her discipline (for example, an epidemiologist presenting at a climate conference on health effects of climate change or a public policy expert giving a presentation to environmental scientists)?
- Has the practice-oriented scholar engaged in advanced problem-solving for the public good?
- Are the results of the practice-oriented scholar's research cited widely and/or in multiple disciplines?
- Has the practice-oriented scholar worked with clients and if so what was the assessment of the client?
- Has the practice-oriented scholar's work been implemented? If so, has the implementation been evaluated? Has the implementation and/or evaluation advanced the research outcomes of the practice work?
- Has the practice-oriented scholar raised or received funding for field or practice work?
- Has the practice-oriented scholar demonstrated leadership by being the principal investigator in a practice-oriented project?

The details of this document should be revisited at each annual review and the unit director may make modifications, considering input from the scholar, and in the case of a change from the initial expectations, with agreement from the scholar. The Appointments committee will review and propose all changes made to this document.

Appendix A6: Standard Letter to Referees for Internal ARS Candidates

Date

CONFIDENTIAL

Name

Address

Dear _____:

I write to ask for your help in evaluating [Candidate], who is being considered for a promotion from Post-doctoral Research Scientist to the Associate Research Scientist grade in the Professional Officers of Research track at the [Unit], of the Earth Institute, Columbia University. The Associate Research Scientist grade is the normal point of entry into the research career track, and an appointment into this track is made with the intention that the researcher will be able to advance to grades comparable to tenure track faculty positions at a university. [Candidate]'s dossier, containing [his/her] statement of research interests, *curriculum vitae*, selected publications, present or pending project participation, and current and pending support, is enclosed. [Candidate] currently holds the rank of X at the [Unit].

Like every nomination to the Professional Officers of Research track at the Earth Institute, that of [Candidate] is subject to a thorough and searching review, first by research scientists/scholars of [his/her/our] own Unit, subsequently by the Appointments Committee of the Earth Institute faculty, and by the Director of the Earth Institute. In assessing [his/her] candidacy, we are interested in [his/her] qualities as a scholar/scientist. It would help our assessment considerably to have your views on the following:

1. How original has [Candidate]'s work been? Is [he/she] likely to be a productive and creative scholar/scientist in the future?
2. How important has [his/her] work been to the development of [his/her] discipline? As the discipline evolves, can we expect [him/her] to work on problems which will be central to it?

In considering [Candidate], as we do with all candidates, we wish to make certain that [he/she] is, or has the potential to be, a leader in [his/her] field. We will, therefore, also appreciate your opinion on these additional questions. How does [he/she] compare with other [scholars/scientists] in the field of X? If [he/she] is not now a leader in the field, may we expect [him/her] to become one? Finally, if [Candidate] were under consideration for a tenured appointment at your institution, would you support his nomination?

We would be most grateful to have your views on these questions and any other points you consider relevant to our assessment of [Candidate]'s candidacy. We will, of course, hold your response in confidence to the extent permitted by law and show it only to the Director of the Earth Institute, members of the Earth Institute faculty Appointments Committee, [Unit] Senior Staff members, and members of the [Unit]'s promotion committee. If you wish, however, you may address any restricted comments to me or to the promotion committee.

While I realize that my request imposes upon your time, the opinions of outside referees play an important part in the Earth Institute's system of review for appointments to the Professional Officers of Research track. For this reason I would very much appreciate the benefit of your views, which I hope you will give us as soon as you possibly can.

With thanks in advance.

Sincerely,

[Unit Director]

Enclosures: Dossier

Appendix A7: Standard Letter to Referees for Internal RS/SRS Candidates

Date

CONFIDENTIAL

Name

Address

Dear _____:

I write to ask for your help in evaluating [Candidate], who is being considered for a promotion to the X grade in the Professional Officers of Research track at the [Unit], of the Earth Institute, Columbia University. The [Senior/ Research Scientist] grade is comparable to a tenured faculty position at a university. [Candidate]'s dossier, containing [his/her] statement of research interests, *curriculum vitae*, selected publications, present or pending project participation, and current and pending support, is enclosed. [Candidate] currently holds the rank of X at the [Unit].

Like every nomination to the Professional Officers of Research track at the Earth Institute, that of [Candidate] is subject to a thorough and searching review, first by research scientists/scholars of [his/her/our] own Unit, subsequently by the Appointments Committee of the Earth Institute faculty, by the Earth Institute faculty and the Director of the Earth Institute, and finally by the Provost. In assessing [his/her] candidacy, we are interested in [his/her] qualities as a scholar/scientist. It would help our assessment considerably to have your views on the following:

1. How original has [Candidate]'s work been? Is [he/she] likely to be a productive and creative scholar/scientist in the future?
2. How important has [his/her] work been to the development of [his/her] discipline? As the discipline evolves, can we expect [him/her] to work on problems which will be central to it?

In considering [Candidate], as we do with all candidates, we wish to make certain that [he/she] is, or has the potential to be, a leader in [his/her] field. We will, therefore, also appreciate your opinion on these additional questions. How does [he/she] compare with

other [scholars/scientists] in the field of X? If [he/she] is not now a leader in the field, may we expect [him/her] to become one? Finally, if [Candidate] were under consideration for a tenure-track appointment at your institution, would you support his nomination?

We would be most grateful to have your views on these questions and any other points you consider relevant to our assessment of [Candidate]'s candidacy. We will, of course, hold your response in confidence to the extent permitted by law and show it only to the Provost, the Director of the Earth Institute, voting members of the Earth Institute faculty, [Unit] Senior Staff members, and members of the [Unit]'s promotion committee. If you wish, however, you may address any restricted comments to me, to the Provost or to the promotion committee.

While I realize that my request imposes upon your time, the opinions of outside referees play an important part in the Earth Institute's system of review for appointments to the Professional Officers of Research track. For this reason I would very much appreciate the benefit of your views, which I hope you will give us as soon as you possibly can.

With thanks in advance.

Sincerely,

[Unit Director]

Enclosures: Dossier

Appendix A8: Standard Letter to Referees for external ARS Candidates

Date

CONFIDENTIAL

Name

Address

Dear _____:

I write to ask for your help in evaluating [Candidate], who is being considered for appointment to the position of Associate Research Scientist grade in the Professional Officers of Research track at the [Unit], of the Earth Institute, Columbia University. The Associate Research Scientist grade is the normal point of entry into the research career track, and an appointment into this track is made with the intention that the researcher will be able to advance to grades comparable to tenured faculty positions at a university. [Candidate]'s dossier, containing [his/her] statement of research interests, *curriculum vitae*, selected publications, present or pending project participation, and current and pending support, is enclosed. [Candidate] currently holds the rank of X at the [Institution].

Like every nomination to the Professional Officers of Research track at the Earth Institute, that of [Candidate] is subject to a thorough and searching review first by research scientists/scholars of the hiring Unit, subsequently by the Appointments Committee of the Earth Institute faculty, and by the Director of the Earth Institute. In assessing [his/her] candidacy, we are interested in [his/her] qualities as a scholar/scientist. It would help our assessment considerably to have your views on the following:

1. How original has [Candidate]'s work been? Is [he/she] likely to be a productive and creative scholar/scientist in the future?
2. How important has [his/her] work been to the development of [his/her] discipline? As the discipline evolves, can we expect [him/her] to work on problems which will be central to it?

In considering [Candidate], as we do with all candidates, we wish to make certain that [he/she] is, or has the potential to be, a leader in [his/her] field. We will, therefore, also appreciate your opinion on these additional questions. How does [he/she] compare with other [scholars/scientists] in the field of X? If [he/she] is not now a leader in the field, may we expect [him/her] to become one? Finally, if [Candidate] were under consideration for a tenure-track appointment at your institution, would you support his nomination?

We would be most grateful to have your views on these questions and any other points you consider relevant to our assessment of [Candidate]'s candidacy. We will, of course, hold your response in confidence to the extent permitted by law and show it only to the Director of the Earth Institute, members of the Earth Institute faculty Appointments Committee, [Unit] Senior Staff members, and members of the [Unit]'s promotion committee. If you wish, however, you may address any restricted comments to me or to the promotion committee.

While I realize that my request imposes upon your time, the opinions of outside referees play an important part in the Earth Institute's system of review for appointments to the Professional Officers of Research track. For this reason I would very much appreciate the benefit of your views, which I hope you will give us as soon as you possibly can.

With thanks in advance.

Sincerely,

[Unit Director]

Enclosures: Dossier

Appendix A9: Standard Letter to Referees for External RS/SRS Candidates

Date

CONFIDENTIAL

Name

Address

Dear _____:

I write to ask for your help in evaluating [Candidate], who is being considered for appointment to the position of [RS/SRS] in the Professional Officers of Research track at the [Unit], of the Earth Institute, Columbia University. The [Senior/ Research Scientist] grade is comparable to a tenured faculty position at a university. [Candidate]'s dossier, containing [his/her] statement of research interests, *curriculum vitae*, selected publications, present or pending project participation, and current and pending support, is enclosed. [Candidate] currently holds the rank of X at [Institution].

Like every nomination to the Professional Officers of Research track at the Earth Institute, that of [Candidate] is subject to a thorough and searching review first by research scientists/scholars of the hiring Unit, subsequently by the Appointments Committee of the Earth Institute faculty, by the Earth Institute faculty and the Director of the Earth Institute, and finally by the Provost. In assessing [his/her] candidacy, we are interested in [his/her] qualities as a scholar/scientist. It would help our assessment considerably to have your views on the following:

1. How original has [Candidate]'s work been? Is [he/she] likely to be a productive and creative scholar/scientist in the future?
2. How important has [his/her] work been to the development of [his/her] discipline? As the discipline evolves, can we expect [him/her] to work on problems which will be central to it?

In considering [Candidate], as we do with all candidates, we wish to make certain that [he/she] is, or has the potential to be, a leader in [his/her] field. We will, therefore, also appreciate your opinion on these additional questions. How does [he/she] compare with other [scholars/scientists] in the field of [X]? If [he/she] is not now a leader in the field, may we expect [him/her] to become one? Finally, if [Candidate] were under consideration for a tenured appointment at your institution, would you support his nomination?

We would be most grateful to have your views on these questions and any other points you consider relevant to our assessment of [Candidate]'s candidacy. We will, of course,

hold your response in confidence to the extent permitted by law and show it only to the Provost, the Executive Director of the Earth Institute, voting members of the Earth Institute faculty, [Unit] Senior Staff members, and members of the [Unit]'s promotion committee. If you wish, however, you may address any restricted comments to me, to the Provost or to the promotion committee.

While I realize that my request imposes upon your time, the opinions of outside referees play an important part in the Earth Institute's system of review for appointments to the Professional Officers of Research track. For this reason I would very much appreciate the benefit of your views, which I hope you will give us as soon as you possibly can.

With thanks in advance.

Sincerely,

[Unit Director]

Enclosures: Dossier

Appendix A10: Standard Letter to Referees for Internal Practice-Oriented ARS Candidates

Date

CONFIDENTIAL

Name

Address

Dear _____:

I write to ask for your help in evaluating [Candidate], who is being considered for a promotion from Post-doctoral to the Associate Research Scientist grade in the Professional Officers of Research track at the [Unit], of the Earth Institute, Columbia University. The Associate Research Scientist grade is the normal point of entry into the research career track, and an appointment into this track is made with the intention that the researcher will be able to advance to grades comparable to tenured faculty positions at a university. [Candidate]'s dossier, containing [his/her] statement of research interests, curriculum vitae, selected publications, present or pending project participation, and current and pending support, is enclosed. [Candidate] currently holds the rank of X at the [Unit].

Like every nomination to the Professional Officers of Research track at the Earth Institute, that of [Candidate] is subject to a thorough and searching review, first by research scientists of [his/her/our] own Unit, subsequently by the Appointments Committee of the Earth Institute faculty, and by the Director of the Earth Institute. In assessing [his/her] candidacy, we are interested in [his/her] qualities as a scholar/scientist and practice-oriented scholar.

A significant component of [Candidate]'s work in his/her present role has been in the area of practice. The Earth Institute recognizes and values practice contributions and has developed criteria for the evaluation of this component of work (attached). We would value your comments on the practice-oriented accomplishments as part of your evaluation, and encourage you to address questions from the enclosed list that you find applicable to [Candidate]'s additional contributions and note how these contributions have advanced knowledge in his/her field. It would help our assessment considerably to have your views on the following:

1. How original has [Candidate]'s work been? Is he/she likely to be a productive and creative practice-oriented scientist in the future?

2. How important has [his/her] work been to the development of [his/her] field? As the field evolves, can we expect [him/her] to work on problems which will be central to it?

In considering [Candidate], as we do with all candidates, we wish to make certain that [he/she] is, or has the potential to be, a leader in [his/her] field. We will, therefore, also appreciate your opinion on these additional questions. How does [he/she] compare with other practice-oriented scientists in the field of [X]? If [he/she] is not now a leader in the field, may we expect [him/her] to become one? Finally, if [Candidate] were under consideration for a tenure-track appointment at your institution, or equivalent position in your field, would you support his/her nomination, bearing in mind the criteria for practice-oriented contributions in assessing the quality of [Candidate]'s work?

We would be most grateful to have your views on these questions and any other points you consider relevant to our assessment of [Candidate]'s candidacy. We will, of course, hold your response in confidence to the extent permitted by law and show it only to the Director of the Earth Institute, voting members of the Earth Institute faculty Appointments Committee, [Unit] Senior Staff members, and members of the [Unit]'s promotion committee. If you wish, however, you may address any restricted comments to me or to the promotion committee.

While I realize that my request imposes upon your time, the opinions of outside referees play an important part in the Earth Institute's system of review for appointments to the Professional Officers of Research track. For this reason I would very much appreciate the benefit of your views, which I hope you will give us as soon as you possibly can.

With thanks in advance.

Sincerely,

[Unit Director]

Enclosures: Candidate's Dossier

Questions for evaluation of practice-oriented scholars

Unit's Characteristics of Practice Work

Appendix A11: Standard Letter to Referees for Internal Practice-Oriented RS/SRS Candidates

Date

CONFIDENTIAL

Name

Address

Dear _____:

I write to ask for your help in evaluating [Candidate], who is being considered for a promotion to the [Research Scientist/Senior Research Scientist] grade in the Professional Officers of Research track at the [Unit], of the Earth Institute, Columbia University. [Candidate]'s dossier, containing [his/her] statement of research interests, curriculum vitae, selected publications, present or pending project participation, and current and pending support, is enclosed. [Candidate] currently holds the rank of Associate Research Scientist / Research Scientist at the [Unit].

Like every nomination to the Professional Officers of Research track at the Earth Institute, that of [Candidate] is subject to a thorough and searching review, first by research scientists of [his/her] own Unit, subsequently by the Appointments Committee of the Earth Institute faculty, by the Earth Institute faculty and the Director of the Earth Institute, and finally by the Provost. Promotion to [Research Scientist/ Senior Research Scientist] carries the same level of scrutiny [as an academic tenure faculty decision / as a promotion to full professor decision]. In assessing his/her candidacy, we are interested in his/her qualities as a scientist and practice-oriented scholar.

A significant component of [Candidate]'s work in his/her present role has been in the area of practice. The Earth Institute recognizes and values practice contributions and has developed criteria for the evaluation of this component of work (attached). We would value your comments on the practice-oriented accomplishments as part of your evaluation, and encourage you to address questions from the enclosed list that you find applicable to [Candidate]'s additional contributions and note how these contributions have advanced knowledge in his/her field. It would help our assessment considerably to have your views on the following:

1. How original has [Candidate]'s work been? Is he/she likely to be a productive and creative practice-oriented scientist in the future?

2. How important has his/her work been to the development of his/her field? As the field evolves, can we expect him/her to work on problems which will be central to it?

In considering [Candidate], as we do with all candidates, we wish to make certain that he/she is, or has the potential to be, a leader in his/her field. We will, therefore, also appreciate your opinion on these additional questions. How does he/she compare with other practice-oriented scientists in the field of [X]? If he/she is not now a leader in the field, may we expect him/her to become one? Finally, if [Candidate] were under consideration for a tenured appointment at your institution, or equivalent position in your field, would you support his/her nomination, bearing in mind the criteria for practice-oriented contributions in assessing the quality of [Candidate]'s work?

We would be most grateful to have your views on these questions and any other points you consider relevant to our assessment of [Candidate]'s candidacy. We will, of course, hold your response in confidence to the extent permitted by law and show it only to the Provost, the Director of the Earth Institute, voting members of the Earth Institute faculty, [Unit] Senior Staff members, and members of the [Unit]'s promotion committee. If you wish, however, you may address any restricted comments to me, to the Provost or to the promotion committee.

While I realize that my request imposes upon your time, the opinions of outside referees play an important part in the Earth Institute's system of review for appointments to the Professional Officers of Research track. For this reason I would very much appreciate the benefit of your views, which I hope you will give us as soon as you possibly can.

With thanks in advance.

Sincerely,

[Unit Director]

Enclosures: Candidate's Dossier
Questions for evaluation of practice-oriented
scholars
Unit's Characteristics of Practice Work

Appendix A12: Template of Memorandum of Agreement for Joint Appointments within the Earth Institute

Memorandum of Agreement for Joint Appointments between the [X research center or unit] and the [Y research center of unit] of the Earth Institute, regarding the appointment of [XYZ], (highest degree)

Title: [Assistant/Associate] Professor of XYZ and XYZ and/or [Associate Research Scientist/Research Scientist/Senior Research Scientist], [Earth Institute research center or unit]

Admin. research center/unit: [Research unit X of the Earth Institute]

Home research center/unit: [Research unit X of the Earth Institute]

Host research center/unit: [Research unit Y of the Earth Institute]

Salary: [Research unit X] will be responsible for X% of the salary; [Research unit Y will be responsible for the other Y% of the salary.

Space: [Laboratory space] will be provided in the [Research unit X or Y]; [classroom and/or office space] will be provided in the [Research unit X or Y], as needed.

Duties: In [Research unit X], Dr. [XYZ] will participate in the research activities of the [Research unit X]. S/he will also serve on the center's committees and serve as [XYZ].
In [Research unit Y], Dr. [XYZ] will participate in the research activities as assigned by the department chair. S/he will serve as [XYZ].

Voting rights: The nominee shall have voting rights in the home and host research centers/units.

Affiliation: Dr. [ABC's] affiliation with the two research units will be as follows:
[e.g. Research Scientist at X and at Y]

APPOINTMENTS AND PROMOTIONS, PART B (Staff Officers)

The following describes the Earth Institute's policies on hiring and promotion of Staff Officers of Research and provides these officers with information relevant to their work in the Institute and to their career development in general. This policy document on staffing will be periodically reviewed and updated as the Earth Institute continues to evolve. This document is supplementary to the Columbia University Faculty Handbook (in particular, chapters IV and VI, which deal with officers of research) and to all existing Columbia University Human Resources Department practices, which apply to all Earth Institute employees, and are viewable online at <http://www.hr.columbia.edu/hr/index.html>.

Staff Officers of Research (i.e., Staff Associates and Senior Staff Associates) are distinguished from Professional Officers of Research (i.e., Associate Research Scientists, Research Scientists, Senior Research Scientists) as follows (Faculty Handbook, Chapter IV, p 87 and viewable online at http://www.columbia.edu/cu/vpaa/handbook/research.html#research_titles):

Professional officers of research hold the doctorate or its professional equivalent and perform independent research in the area of their training. Depending on their seniority and grade of office, they may be principal investigators (see Chapter VI). Even when they are not, they have substantial independence in performing their responsibilities. They design and carry out experiments, analyze the data, and publish the results, either independently or as co-authors with other participants in their research programs. They set research goals or assist principal investigators in doing so, and they may participate in the development of proposals and the administration of grants.

Staff officers of research assist members of the faculty or professional officers of research in the conduct of research or a clinical program. They carry out assigned duties in the design of apparatus, the adaptation of relevant technology to the needs of a project, the conduct of specific experiments, and the analysis of data. They may also be responsible for collecting data in a clinical program and providing services to its clients. In contrast to professional officers of research, they are not involved in setting research goals, do not design overall experimental protocols, and may not have a theoretical understanding of all aspects of the project in which they are engaged. They are distinguished from technicians, who are members of the supporting staff, in that they work under only limited supervision on complex assignments that require them to exercise a high degree of initiative and independent judgment. They also generally have greater knowledge and experience in their discipline, which they use to design solutions to specific research or technical problems.

Staff Officers of Research at the Earth Institute

Staff Officers of Research advance the research capabilities of the Earth Institute by assisting in specific functions in support of research, as set by their supervisors. There is great diversity in this category, and this accommodates special needs to support specific but also diverse research activities. Staff Officers of Research are important team members, typically focused on a specific project area. They may revise the design or utilize a complex research tool, adapt relevant technology to a specific function, or conduct experiments and/or analyze data, for example. They may also serve as co-Principal Investigators on proposals (see also Section 4). They have specialized knowledge and experience in their discipline that they use to design solutions to specific research or technical problems. They work under limited supervision on complex assignments that require them to exercise a high degree of initiative and independent judgment. There are three levels of staff officer of research at the Earth Institute; Staff Associate (SA), Senior Staff Associate I (SSA-I), and Senior Staff Associate II (SSA-II). Promotion requires demonstrated added roles and responsibilities, in addition to demonstrated years of experience in that area of expertise.

Columbia defines two general categories for staff officers of research: Staff Associate and Senior Staff Associate. Within these categories there may be a number of working position titles. The Earth Institute has adopted two grades within the Senior Staff Associate rank, signifying a promotable distinction in roles and responsibilities within the senior rank. Thus, at the Earth Institute, there are three levels of Staff Officer of Research.

The first column of the table below shows the Columbia University career track of Staff Associate of Research, with its two general grade categories. The second column shows the equivalent titles at the Earth Institute, with the additional level of Senior Staff Associate II shown.

Columbia Staff Associate

Career Track

Staff Associate

Senior Staff Associate

Senior Staff Associate

Earth Institute Staff Associate

Career Track

Staff Associate

Senior Staff Associate I

Senior Staff Associate II

The minimum requirements for **Staff Associate** are a bachelor degree and at least four years of professional experience in a relevant field. The minimum requirements for **Senior Staff Associate I** are a bachelor degree and at least eight years of professional experience in a relevant field (see also <http://www.columbia.edu/cu/vpaa/fhb/main.html>). The minimum requirements for consideration of promotion to **Senior Staff Associate II** are a bachelor or higher degree and at least twelve years of professional experience in a relevant field. A master degree may substitute for two years' professional experience and a Ph.D. may substitute for four years professional experience. The Earth Institute will consider the equivalency of non US degrees on a case-by-case basis.

Promotion between ranks is not based solely on years of experience; promotion requires demonstrated added roles and responsibilities, and these are assessed by comparison of a proposed new position description with the old position description on a case by case basis. In contrast to the Research Scientist track, Staff Officers of Research do not have to be promoted in category or in level in order to retain their employment status.

Salaries within either of Columbia's two Staff Associate grades have considerable range. Salaries at or above the review point requires prior approval of the Provost's Office. A table showing the current minimum and review point salary levels corresponding to each of the two grades is available at <http://www.columbia.edu/cu/vpaa/docs/ressal.html>.

The Earth Institute utilizes Columbia's Staff Officer of Research track to bring much needed expertise and support to the diverse research efforts underway at the Earth Institute. This requires the hiring of specialists whose qualifications may exceed the minimum qualifications listed above. For example, Earth Institute employs candidates with master's and doctoral degrees as Staff Officers of Research when the candidate has specialized skill and/or strong technical capabilities and a preference of performing in these areas over research publications, grant proposal writing, etc.

Appointment to Staff Associate, Senior Staff Associate I, or Senior Staff Associate II at the Earth Institute

This process will be conducted between the unit and the Earth Institute Human Resources department. It involves approval by the Columbia University Office of the Provost of a job description and, (if the complement of Staff Associates is increasing, a Staff Associate Questionnaire). This is followed by the establishment of a search committee, and the posting and advertising of the position.

Promotion from Staff Associate to Senior Staff Associate I, and Senior Staff Associate II at the Earth Institute

Promotion between Staff Associate and Senior Staff Associate ranks is not based solely on years of experience; promotion requires demonstrated added roles and responsibilities, and these are assessed by comparison of a proposed new position description with the old position description on a case by case basis. When relevant, advanced degrees may substitute for experience (see page 44). In contrast to the Research Scientist track, Staff Officers of Research do not have to be promoted in category or in level in order to retain their employment status.

- The minimum requirements for Staff Associate are a bachelor or higher degree and at least four years of professional experience in a relevant field.
- The minimum requirements for Senior Staff Associate I are a bachelor or higher degree and at least eight years of professional experience in a relevant field (see also <http://www.columbia.edu/cu/vpaa/fhb/main.html>).
- The minimum requirements for consideration of promotion to Senior Staff Associate II are a bachelor or higher degree and at least twelve years of professional experience in a relevant field.

The procedure initiates as follows:

1. The supervisor is responsible for drafting a new position description that justifies the need for a higher level position. Promotion will typically result in a salary increase of 8-12 percent, depending on duties assumed, providing that it is consistent with University salary guidelines at the time. Before moving forward with the nomination, the supervisor will advise the candidate that the normal salary increase is 8-12 percent. The supervisor may note any planned recommendation for an increase above 12 percent, but will advise that it would be subject to approval by the Unit Director, the Earth Institute Director and the Office of the Provost.
2. Written nomination of the candidate for promotion into this new position will be made by the supervisor. Seconding letters will be obtained from two other qualified Earth Institute senior staff or Unit Directors. With the permission of the Unit Director, seconding letters may be contributed by appropriate senior staff of the University who are not members of the Earth Institute.
3. The nominating supervisor will submit the position justification and the nomination to his/her unit director for approval. In the case of approval, the Unit Director will bring the recommended promotion to that unit's Human Resources department for next steps:
4. The supervisor, working with Human Resources, will complete a staff officer questionnaire, and any other required documents, for Human Resources to submit to the Office of the Provost.
5. Office of the Provost approves or denies the position justification (in the case of a new position), the promotion, and the proposed salary.

GENERIC PERFORMANCE STANDARDS (Part C)

Notes:

1. All positions require some degree of performance in all areas identified in the table below.
2. The performance standards are for use in guiding and assessing performance in the Earth Institute. In addition, specific job requirements and performance expectations may apply.
3. The standards must be interpreted appropriately to the level of the job being considered; the higher the job level, the higher the expectation of achievement for each item. In some cases, specific levels of achievement may be negotiated.

	Generic Earth Institute Performance Expectations
Earth Institute Mission	Understands and contributes to the Earth Institute unit's mission and goals. Aligns work toward the unit's goals. As applicable, assists with efforts to improve the support of the unit's mission. Represents the Earth Institute and its mission to visitors and in public as appropriate.
Qualifications/ Experience	Possesses and draws upon knowledge and skills required of the job. Demonstrates willingness and ability to learn new skills and topics. Possesses and draws upon practical experience relevant to the job and to the Earth Institute unit.
Knowledge	Has a sound knowledge of the job's practices and the computing, administrative or other systems relevant to the job and the Earth Institute unit's mission. Is able to comprehend and convey instructions and ideas in writing and orally. Contributes input to group discussions and work practice improvements within the Earth Institute unit.
Projects	Meets assigned project tasks. Assists others to achieve project goals. Shows common sense and reliability in work tasks. Organizes own time well. Is able to work without day-to-day supervision.
Collaboration	Is able to work effectively as a team member within the given research unit, the Earth Institute and the Columbia University family. Shares skills and knowledge for the benefit of the group effort, and assists colleagues. Takes initiative and provides leadership on tasks as required.
Innovation	Shows inventiveness and resourcefulness in carrying out tasks, seeking solutions to work challenges, and proposing and devising better ways of achieving job results.
Resources	Responsibly manages physical and other assets, and financial resources. Assists in the acquisition of new resources or in-kind support as necessary.

Annual Performance Review Timetable

Activity	Deliverable	Submit To	Timeline
Review of prior year work plans	Staff creates a two-page write-up: (pg 1) a summary of prior year, and (pg 2) a bullet list of outputs detailing: publications, expert presentations, course materials developed, mentoring activities, institutional representation at meetings/work-shops, tools or methods developed, etc.	Supervisor or affiliated manager, as appropriate	Early April, according to HR guidelines.
Annual performance review (APR)	Supervisor, in consultation with appropriate colleagues, creates a written evaluation of the staff member (the annual performance review).	Earth Institute Human Resources	Mid-April, according to HR guidelines.
Staff Response on APR	Staff member accepts or comments on annual performance review and on supervision or mentoring received.	Earth Institute Human Resources	Late April, according to HR guidelines.