OFFICE MEMORANDUM

Sub: -Scheme for engagement of Consultants/Young Professionals in National Water Mission, MoWR, RD & GR – Extension of Scheme upto 31-3-2017

National Water Mission has implemented a scheme for engagement of Young Professionals and Consultants for one year i.e. F.Y. 2015-16 and 5 Consultants, 4 Young Professionals and one Executive Assistant joined in NWM secretariat for providing assistance in achieving objectives of NWM. The scheme is extended upto 31-3-2017 for F.Y. 2016-17 (XIIth Plan) with the following amendments:

(i) Clause 3: ---Deleted----. (Clause 3.0: The amount of fee in the case of retired Government officials shall not exceed the ceiling of (Last Pay + DA Drawn) – (Basic Pension) and it will have to be within the remuneration band, prescribed limit as per Government of India guidelines issued by MoF/DoPT. This provision stands deleted and similarly Sl. No. 14 of the TOR in offer of engagement consultants in NWM deleted retrospectively.

(ii) All the concerned offices are requested to Note changes and OM is placed on MoWR, RD & GR web site: www/mowr.gov.in

This issues with the approval of Competent Authority and concurrence of IFD is accorded vide FTS dated 29-2-2016.

(S.K. Mohiddin)
Scientist C, NWM

Distribution:
(i) PAO, MoWR, RD & GR, Shastri Bhawan, New Delhi
(ii) US (A)/US (GA), MoWR, RD & GR, SS Bhawan, New Delhi
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(v) Sh. Koti Reddy, Se ‘D’, NIC, MoWR, RD & GR, SS Bhawan for uploading on the web site

Copy to:
(i) Sr. PPS to AS & MD, NWM, CGO Complex, New Delhi
(ii) PS to JS & FA, MoWR, RD & GR, SS Bhawan, New Delhi
(iii) PPS to Adv (C & M), NWM, CGO Complex, New Delhi
(iv) PS to Adv (Tech), NWM, CGO Complex, New Delhi
Government of India  
Ministry of Water Resources, River Development & Ganga Rejuvenation  
National Water Mission  

2nd floor, Block No.3, CGO  
Complex, Lodhi Road, New  
Delhi- 110003 Dated:  
18th March, 2016

Scheme for engagement of Young Professionals and Consultants in National Water Mission, MoWR, RD & GR-  
Extension of Scheme upto 31-3-2017.

The National Water Mission Secretariat has been established by the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR, RD & GR). The MoWR, RD & GR, Government of India has proposed to engage Young Professionals and Consultants in National Water Mission (NWM) to provide necessary quality assistance to NWM Secretariat for achieving its objectives.

1. The Terms and Conditions, the eligibility criteria etc., for engaging the Young Professionals and Consultants shall be as under:

1.1. Categories to be engaged: Young Professionals/Executive Assistants & Consultants.

1.2. To allow short term engagement of “eligible persons” with NWM, Ministry of Water Resources (MoWR, RD & GR) as “Young Professionals and Consultants”. The candidates shall be shortlisted on defined “eligibility” and “suitability” criteria by a Consultancy Evaluation Committee (CEC) constituted for the purpose by MoWR, RD&GR.

1.3. Objectives: To provide assistance in achieving the objectives of NWM in a time bound manner and to have the desired qualitative and quantitative outputs.

1.3.1 It is neither a job nor an assurance for a job in the NWM, MoWR, RD & GR.  
1.3.2 The Young Professionals and Consultants would contribute to the policy formulation by generating inputs such as empirical analysis, briefing reports, policy papers, etc.  
1.3.3 The Government may benefit from the fresh thinking of young generation which may infuse new ideas in its functioning.
1.4. **Eligibility**: Interested candidates, who are citizens of India and fulfilling the eligibility criteria detailed below, may apply for one or both the categories (Young Professionals and Consultants).

1.5. **Duration of the Engagement**: The initial term of appointment shall be one year and subsequent extension(s) if any, shall be decided on case to case basis depending upon the specific job and the time frame for its completion. The maximum period of engagement of the two categories shall not exceed the XII Plan period.

The appointment of Young Professionals and Consultants would be on Full-time basis and they would not be permitted to take up any other assignment during the period of Consultancy with the National Water Mission.

The appointment of Young Professional/Consultants is of a temporary (non-official) nature and the appointment can be cancelled at any time by the NWM without assigning any reason.

1.6. **Number of vacancies**:
   - Young Professionals-Five
   - Consultants - Five

1.7. **Remuneration for the Young Professionals and Consultants**: The maximum amount of monthly consolidated fee and Local Conveyance payable to Young Professionals/Consultants shall be as under:-

<table>
<thead>
<tr>
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<th>Rs.25,000/- to Rs.40,000/- depending upon educational qualification and experience, Plus Rs.1500/- p.m. as local conveyance.</th>
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<tbody>
<tr>
<td>Young Professionals</td>
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<tr>
<td>Consultant</td>
<td>Rs.40,000/- to Rs. 70,000/- depending upon educational qualification and experience, Plus Rs.3000/- p.m. as local conveyance.</td>
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1.8. **Certificate of Professional Services**: Experience Certificates will be issued to the Young Professionals, Consultants, on satisfactory completion of their tenure and on submission of their Report/Paper and its evaluation in the concerned Division in NWM.

1.9. **Declaration of Secrecy**: All professionals engaged will be required to furnish oath of secrecy in prescribed format at the time of reporting for the engagement. The professionals may not, except with the previous sanction of NWM in the discharge of his/her duties, publish a book or a compilation of articles or participate in a radio broadcast or contribute an article or write a letter to any newspaper or periodical, either in his/her own name or anonymously or pseudonymous in the name of any other person, if such book,
article, broadcast, uses any information that he may gather as part of this consultancy, without the prior approval of NWM.

During the period of assignment with NWM, the professionals would be subject to the provisions of the Indian Official Secret Act, 1923 and will not divulge any information gathered by him/her during the period of assignment to anyone who is not authorised to know/ have the same.

The professionals engaged by the NWM shall in no case represent or give opinion or advice to others in any manner which is adverse to the interest of NWM.

1.10. Application and Selection:

1.10.1. In addition to submission of applications in hard copy, a link for submission of online application would be provided on the web-site of NWM, MoWR, RD & GR.

1.10.2. Application can be made either online or in hard copy.

1.10.3. A system generated acknowledgement or confirmation by email would be made available to the applicants.

1.10.4. The selection shall be made by the NWM on the basis of recommendations of Consultancy Evaluation Committee (CEC) constituted for the purpose by the MoWR, RD & GR. NWM Secretariat will issue communication to the selected Young Professionals/Consultants to join within prescribed period.

1.10.5. The candidate will be required to produce original certificates in support of fulfilling the eligibility criteria, etc., as to educational qualification and proof of age once offer for Young Professionals/Executive Assistants, Consultants is made.

1.10.6. The applications shall be scrutinized and the offer will be communicated to the selected candidates subject to the availability of slot and approval of the Competent Authority.

Note:

While all efforts would be made to keep the online system of applications activated at all times, no claim on account of its being unavailable would be entertained.
1.11. **Logistics and Support:** The Young Professionals/Executive Assistants, Consultants, attached to the NWM, would be provided working space, computer/internet facility and other necessities as deemed fit.

1.12. **Expected Outcomes**

1.12.1. The Young Professionals/Consultants, shall be attached with NWM including research institutes of the MoWR, RD & GR keeping in view the areas of interest.

1.12.2. The Young Professionals/Consultants, shall prepare the outline of the expected outcome in discussion with the concerned division and submit the project plan along with time lines. After completion, the Young Professionals, Consultants, shall submit a completion report both in hard copy and soft copy to the concerned in-charge officer of the NWM Secretariat.

1.12.3. Young Professionals, Consultants, will be required to present a brief report/paper at the end of their assignment to the NWM Secretariat also conveying their observations and the suggestions, if any.

1.13 **Responsibility of the Wing Heads:** The Young Professionals/Consultants shall be attached to an officer of the rank of Deputy Secretary/Director of the NWM who shall ensure timely initiation of the work plan and final submission of the Project Report. Important issues arising out of such engagement may be presented on a quarterly basis by the concerned Wings.

1.14. **Annual Report:** The NWM secretariat will compile an annual Report on the Project completed during the year and policy suggestions emanating from it.

2 **Age-limit:** - The maximum age limit for appointment of Young Professionals/Executive Assistants shall be 40 years and for Consultants shall be 65 years.

3. **Deleted** (Clause 3.0: The amount of fee in the case of retired Government officials shall not exceed the ceiling of (Last Pay + DA Drawn) - (Basic Pension) and it will have to be within the remuneration band, prescribed limit as per Government of India guidelines issued by MoF/DoPT). This provision stands deleted.

3.1 **Drawal of Pension:-** A retired Government official appointed as Consultant in any of the two categories shall continue to draw pension and the dearness relief on pension during the period of his/her engagement as Consultant. His/her engagement as Consultant shall not be considered as a case of re-employment.
3.2 **Allowances:** The Consultants shall not be entitled to any allowance such as Dearness Allowance, Residential Telephone, Transport Facility, Residential Accommodation, Personal Staff, CGHS, Medical Reimbursement etc. However, they will be entitled for “local conveyance” as per the rates prescribed in para 1.7 above.

3.3 **Leave:** Young Professionals/Consultants shall be eligible for 8 days’ leave in a calendar year on pro-rata basis. Therefore, a Consultant shall not draw any remuneration in case of his/her absence beyond 8 days in a Year (calculated on a pro-rata basis). Also un-availed leave in a calendar year cannot be carried forward to next calendar year. The NWM/ MoWR, RD&GR would be free to terminate the services in case of absence of a Young Professional/Consultant by more than 15 days beyond the entitled leave in a calendar year.

3.4 **TA/DA:** No TA/DA shall be admissible for joining the assignment or on its completion. Young Professionals/Consultants will not be allowed foreign travel at Government expenses. However, Young Professionals/Consultants shall be allowed TA/DA for their travel inside the country in connection with the official work.

3.5 **Library Facility:** The Young Professionals/Consultants shall have access to the National Water Mission, MoWR, RD&GR Library during the period of their engagement and shall be allowed to borrow books as per the Library Rules.

3.6 For determining the total period of five years, services earlier rendered by these Young Professionals/Consultants in National Water Mission will be counted.
Terms of References (TOR) for engagement of Young Professionals/Consultants in NWM, MoWR, RD&GR

The main objective of NWM is “Conservation of Water, minimizing waste and ensuring its more equitable distribution both across and within States through integrated water resources development and management”.

Five goals identified for the NWM are:

1. Comprehensive water data base in public domain and assessment of impact of climate change on water resources;
2. Promotion of citizen and State action for water conservation, augmentation and preservation;
3. Focused attention to vulnerable areas including over-exploited areas;
4. Increasing water use efficiency by 20% and
5. Promotion of basin level integrated water resources management.

The overall approach of the Mission is to have integrated planning for sustainable development and efficient management with active participation of the stakeholders after identifying and evaluating the development scenario and management practices towards better acceptability on the basis of assessment of the impacts of climate change on water resources based on reliable data and information.

Implementation of objectives of the Mission works through collaborative action with many partners, policy makers, development agencies, individual experts and both public and private sector organizations. It calls for long-term sustained efforts both in terms of time bound completion of activities and ensuring the implementation of policies and enactment of necessary legislation through persuasion at different levels with the Central and State Governments.

Schedule for completion of Tasks: The proposed schedule for completion shall not exceed the XII Plan period.

Final Outputs that will be required of the YP/Consultants: At the end of the term the YP/Consultants would submit a detail completion report both in hard and soft copy to the NWM Secretariat highlighting the assignments & achievements.
1.0 Goal 1: Comprehensive water data base in public domain and assessment of impact of climate change on water resources

1.1 Statement of Objectives - Terms of Reference for Goal 1 include:

A. Young Professionals:

1.1.1 To have a comprehensive data base in public domain. This includes,

a. Review and establishment of network for collection of data covering,
   i. network of hydrological observation stations
   ii. automatic weather stations
   iii. automatic rain gauge stations
   iv. establishment of additional stations for better network for evaporation data, rainfall data collection through automatic sensors
   v. hydro-meteorological and hydrological data for proper assessment of impact of climate change particularly in Himalayan region, estuarine and coastal areas, low rainfall areas, snow areas, glaciated areas etc., including other improvements required in hydrometric networks to appropriately address the issues related to the climate change
   vi. establishment/strengthening of ground water monitoring network
   vii. data about river geometry and morphology including erosion
   viii. surface and ground water quality data

b. Development of water resources information system and web enabled groundwater information system placed in public domain that includes all information except data of sensitive and classified nature.

c. Development / implementation of modern technology for measurement of various data

d. Developing inventory of wetland

B. For Consultants:

1.1.2 To have an assessment of the impact of climate change on water resources in terms of availability as well as the quality of the water from surface and ground water sources

a. Research and studies on all aspects related to impact of climate change on water resources including quality aspects of water resources with active collaboration of all research organizations working in the area of climate change

b. Reassessment of basin wise water situation

c. Projection of the impact of climate change on water resources
1.2 Position Overview

The Consultant for Goal 1 would direct efforts covering various elements of ToR listed above and provide leadership of the Goal 1 under the overall Mission’s strategy. The person will ensure that activities listed under Goal 1 deliver.

1.3 Outline of Tasks to be carried out - Duties and Responsibilities

1.3.1 Manage, coordinate and lead efforts towards achievement of Goal 1 of NWM

- Lead efforts under Goal 1 of the National Water Mission
- Maintains recognition both at the National and State levels by ensuring delivery on the objectives listed under Goal 1.
- Identifies key issues and solution relevant to achievement of Goal 1, assures quality and relevance of the outputs and drives innovative ideas through partnerships and networks
- Capable of demonstrating the development and leadership of interdisciplinary themes/ projects/ outcomes, ensures cross fertilization of concepts, ideas and results.
- Manage resources in accordance with the policies and applicable regulations of the Ministry of Water Resources, Government of India.
- Responsibilities include planning, assigning, and directing work, appraising performance under Goal 1 and guiding ways and means towards achievement of Goal 1.
- Takes overall responsibility for the management and development of resources (including human as well as financial resources) and ensures effective implementation and reporting in cooperation with NWM’s Office, and as per the applicable rules and regulations.

1.3.2 Uptake and Communications to ensure outputs have high impact

- Work closely with State Departments to ensure that achievement of Goal 1 contributes to their development.
- Works with Directors and Senior Officers to develop integrated efforts.
- Works towards development of effective relationships with various stakeholders
- Communicate effectively at the regional, state and national levels to disseminate key outcomes of Goal 1 of NWM
- Represents NWM in conferences and act as spokesperson on issues related to Goal 1
- Secures cooperation and necessary resources needed for effective implementation of Goal 1 through effective networking and project development in collaboration with stakeholders and cooperation with NWM directors and senior officers.

1.4 Skills and Qualifications

- Understanding of development challenges especially those related to Goal 1.
- Strong reputation as a key contributor to one or more of the areas mentioned in the ToR and associated with the position as evidenced by a strong track record, publications, and other acknowledgements.
- Demonstrate experience in fostering innovation and clear understanding of impact pathways (use of Decision Support Systems/ Integrated modeling tools).
- Should be able to assist work related to data management and analysis of climate change impact on water resource management (under different scenarios).
- Should have experience in the field of developing and establishing data management frameworks and water resources information system.
- Should be able to assess basin wise water situation including water quality using state-of-the-art techniques with focus on areas vulnerable to climate change.
- Demonstrate skills in identifying and assessing policy issues.
- Strong planning, communication and liaison skills.
- Ability to integrate both qualitative and quantitative data analysis.
- Ability to establish and maintain effective working relationships with co-workers and various stakeholders.

1.5 Educational Qualification and experience

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<tr>
<td>Goal I.</td>
<td>Essential:</td>
<td>(i) Professionals having a Masters degree or B Tech in relevant subject and minimum post qualification experience of 10 years in the requisite field. <strong>For very bright candidates, the Evaluation Committee would be competent to relax the post qualification experience requirement upto 5 years. Cross-disciplinary qualifications that cover more than one area of specialization will be preferred.</strong> (iii) Retired Government employees with (i) grade pay of Rs.7600/- and above &amp; (ii) at least 10 years’ experience in the required domain field would also be eligible for this position.</td>
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<tr>
<td>Comprehensive water data base in public domain and assessment of impact of climate change on water resources</td>
<td>(i) Professionals having a Masters degree in hydrology, geophysics, environmental sciences, meteorology, Remote Sensing, GIS, IT or B.Tech, or equivalent in field/subject related to water resources. Desirable: Persons with M.Tech or additional qualifications, research experience, published papers and post qualification experience in the relevant field would be preferred.</td>
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1.6 Desirable Experience/Knowledge:

As effective use and application of multi-disciplinary data remains integral in evaluating the impact of climate change on water resources, experience in the fields of application of Hybrid Decision-Support Systems, Integrated Models, Parametric analysis, Uncertainty Analysis tools etc., is desirable. Strong ability to work in teams and multi-disciplinary/sectoral projects is required.
2.0 Goal 2: Promotion of citizen and state action for water conservation, augmentation and preservation

2.1 Statement of Objectives - Terms of Reference for Goal 2 include:

A. For Young Professionals:

2.1.1 Empowerment and involvement of Panchayati Raj Institutions, Urban Local Bodies, Water Users' Associations and primary stakeholders in management of water resources

2.1.2 Promoting Participatory Irrigation Management

2.1.3 Sensitization of elected representatives of overexploited areas on dimensions of the problems and to orient investment under MNREGP towards water conservation

B. For Consultants:

2.1.4 Providing incentives for water neutral and water positive technologies
   a. attractive fiscal packages
   b. encourage use of wastewater

2.1.5 Encourage participation of NGOs in various activities related to water resources management, particularly in planning, capacity building and mass awareness

2.1.6 Involve and encourage corporate sector / industries to take up, support and promote water conservation, augmentation and preservation within the industry and as part of corporate social responsibility

2.2 Position Overview

The Consultant for Goal 2 would direct efforts covering various elements of ToR listed above and provide leadership of the Goal 2 under the overall Mission's strategy. The person will ensure that activities listed under Goal 2 deliver.

2.3 Outline of Tasks to be carried out - Duties and Responsibilities

2.3.1 Manage, coordinate and lead efforts towards achievement of Goal 2 of NWM

• Lead efforts under Goal 2 of the National Water Mission

• Ability to provide strategic guidance to corporate sector / industries to take up, support and promote water conservation, augmentation and preservation within the industry and as part of corporate social responsibility

• Facilitate strategies/ incentive mechanisms that can enable uptake of water neutral and water positive technologies in various sectors (agriculture – irrigation, industries etc.)
• Maintains recognition both at the National and State levels by ensuring delivery on the objectives listed under Goal 2.
• Identifies key issues and solution relevant to achievement of Goal 2, assures quality and relevance of the outputs and drives innovative ideas through partnerships and networks
• Capable of demonstrating the development and leadership of interdisciplinary themes/projects/outcomes, ensures cross fertilization of concepts, ideas and results.
• Manage resources in accordance with the policies and applicable regulations of the Ministry of Water Resources, Government of India.
• Takes overall responsibility for the management and development of resources (including human as well as financial resources) and ensures effective implementation and reporting in cooperation with NWM’s Office, and as per the applicable rules and regulations.

2.3.2 Uptake and Communications to ensure outputs have high impact
• Work closely with State Departments to ensure that achievement of Goal 2 contributes to their development. Improves Intra and Inter-Institutional Communication and cooperation.
• Involve efforts towards empowerment and involvement of Panchayati Raj Institutions, Urban Local Bodies, Water User Associations, and other stakeholders in management of Water Resources.
• Works towards sensitization of elected representatives of over-exploited areas and orient efforts and solutions towards water conservation.
• Communicate effectively at the local levels of governance to disseminate key outcomes of Goal 2 of NWM
• Encourage participation of NGOs in various activities related to Water Resource Management particularly planning, capacity building and mass awareness.
• Represents NWM in conferences and act as spokesperson on issues related to Goal 2 of NWM.

2.4 Skills and Qualifications
• Understanding of development challenges especially those related to Goal 2.
• Has extensively worked towards sensitization and mass awareness of various stakeholders (particularly at local and regional levels) on aspects related to Water conservation, Participatory Irrigation Management etc.
• Demonstrate experience of working on multi-disciplinary subjects (e.g., Water-energy-climate-livelihood connect; Water and Health etc.) as well as in fostering innovation and clear understanding of impact pathways.

• Ability to establish and maintain effective working relationships with various stakeholders and work in multi-disciplinary teams

• Demonstrate skills in identifying and assessing policy issues

• Strong planning, communication and liaison skills

2.5 Education and experience

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<tr>
<th>Goals of NWM</th>
<th>Minimum Qualifications for Young Professionals</th>
<th>Qualifications for Consultants</th>
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<tbody>
<tr>
<td>Goal II: Promotion of citizen and State action for water conservation, augmentation and preservation</td>
<td>Essential: (i) Professionals having Masters Degree in Science, environmental sciences, Social Sciences or B.Tech, or equivalent in field/subject related to water resources. Desirable: Persons with M.Phil, M.Tech or additional qualifications, research experience, published papers and post qualification experience in the relevant field would be preferred.</td>
<td>(i) Professionals having a Masters degree or B Tech in relevant subject and minimum post qualification experience of 10 years in the requisite field. For very bright candidates, the Evaluation Committee would be competent to relax the post qualification experience requirement upto 5 years. Cross-disciplinary qualifications that cover more than one area of specialization will be preferred. (iii) Retired Government employees with (i) grade pay of Rs.7600/- and above &amp; (ii) at least 10 years’ experience in the required domain field would also be eligible for this position.</td>
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2.6 Desirable Experience/Knowledge:

As effective use and application of multi-disciplinary data remains integral in evaluating the impact of climate change on water resources, experience in the fields of application of Hybrid Decision-Support Systems, Integrated Models, Parametric analysis, Uncertainty Analysis tools etc., is desirable. Strong ability to work in teams and multi-disciplinary/sectoral projects is required.
3.0 Goal 3: Focused attention to vulnerable areas including over-exploited areas

3.1 Statement of Objectives- Terms of Reference for Goal 3 include:

A. For Young Professionals:

3.1.1 Expedient implementation of water resources projects particularly the multipurpose projects with carry over storages benefiting drought prone and rain deficit areas
   a. implementation of ERM of irrigation projects and minor irrigation schemes by States in areas / situations vulnerable to climate change particularly drought prone and rain deficit areas
   b. adequate allocations for undertaking projects and their time bound completion
   c. review of policies related to project financing

3.1.2 Promotion of traditional system of water conservation
   a. repair, renovation and restoration of water bodies in areas / situations vulnerable to climate change

B. For Consultants:

3.1.3 Physical sustainability of groundwater resources
   a. implementation of programme for conservation of water through recharge of groundwater including rainwater harvesting, artificial recharge in over-exploited, critical and semi-critical areas
   b. evaluate incentives for adopting and sustaining roof top rain water harvesting systems

3.1.4 Conservation and preservation of wetland

3.1.5 Exploring options for augmenting water supply in critical areas
   a. addressing quality aspects of drinking water particularly in rural area
   b. promotion of water purification and desalination

3.1.6 Systematic approach for coping with floods
   a. mapping of areas likely to experience floods, establishing hydraulic and hydrological models and developing comprehensive approach to flood management & reservoir sedimentation
   b. Encourage and enforce flood plain zoning in flood prone rivers
3.2 Position Overview

The Consultant for Goal 3 would direct efforts covering various elements of ToR listed above and provide leadership of the Goal 3 under the overall Mission’s strategy. The person will ensure that activities listed under Goal 3 deliver.

3.3 Outline of Tasks to be carried out - Duties and Responsibilities

- Lead efforts under Goal 3 of the National Water Mission
- Ability to provide strategic guidance on assessing impacts of climate change on water availability in drought and flood prone areas and identification of risks for various sectors.
- Maintains recognition both at the National and State levels by ensuring delivery on the objectives listed under Goal 3.
- Understands infrastructure needs including rehabilitation or construction of climate-proofed infrastructure for: (i) small scale irrigation systems and drainage, including water storage discharge and other drought management measures; (ii) supply of drinking water (iii) flood management.
- Facilitate strategies/mechanisms and measures that include, (a) early warning systems for floods and droughts; (b) adaptation measures/options at the farm and household levels, (c) advisory services to disseminate information on climate change risks management practices and technologies.
- Capable of developing and demonstrating appreciation towards a systematic approach for coping with floods that includes, mapping of areas likely to experience floods, establishing hydraulic and hydrological models and developing comprehensive approach to flood management & reservoir sedimentation and Analyse irrigation works that are resilient to climate change in vulnerable and over-exploited areas.
- Capable of exploring options to augment water supply in vulnerable areas, such as *promotion of traditional systems of water conservation* and implementation of programme for repair, renovation and restoration of water bodies; evaluate *groundwater recharge systems* in over-exploited, critical and semi-critical areas and devise strategies that include *rainwater harvesting and artificial recharge to groundwater.*

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• Manage resources in accordance with the policies and applicable regulations of the Ministry of Water Resources, Government of India.
• Takes overall responsibility for the management and development of resources (including human as well as financial resources) and ensures effective implementation and reporting in cooperation with NWM’s Office, and as per the applicable rules and regulations.
• Communicate effectively to disseminate key outcomes of Goal 3 of NWM
• Represents NWM in conferences and act as spokesperson on issues related to Goal 3 of NWM.

3.4 Skills and Qualifications

• Understanding of development challenges especially those related to Goal 3.
• Ability to assess impacts of climate change on water availability in drought and flood prone areas and identification of risks for various sectors
• Should have working knowledge on the following aspects:
  a. Use of GIS and IT tools in the water sector applicable to water resource evaluation, floods and droughts assessments, flood plain zoning in flood prone rivers, rejuvenation of traditional water harvesting systems
  b. Use of integrated hydraulic, hydrological, groundwater flow models for developing comprehensive approach to water resource management, groundwater management, flood management & reservoir sedimentation.
  c. Designing and developing climate change risks management practices and technologies including adaptation measures/ options, Infrastructure planning and design covering floods and droughts, water purification and desalination.
• Demonstrate experience of working on multi-disciplinary subjects
• Ability to establish and maintain effective working relationships with various stakeholders and work in multi-disciplinary teams
• Demonstrate skills in identifying and assessing policy issues
• Strong planning, communication and liaison skills
• Strong reputation as a key contributor to one or more of the areas mentioned in the ToR and associated with the position as evidenced by a strong track record, publications, and other acknowledgements.
• Demonstrate experience in fostering innovation and clear understanding of impact pathways (use of Decision Support Systems/Integrated modeling tools).
• Strong planning, communication and liaison skills
• Ability to integrate both qualitative and quantitative data analysis

3.5 Education and experience

<table>
<thead>
<tr>
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<th>Minimum Qualifications for Young Professionals</th>
<th>Qualifications for Consultants</th>
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<tr>
<td>Goal III</td>
<td>Essential:</td>
<td>(i) Professionals having a Masters degree or B Tech in relevant subject and minimum post qualification experience of 10 years in the requisite field. For very bright candidates, the Evaluation Committee would be competent to relax the post qualification experience requirement upto 5 years. Cross-disciplinary qualifications that cover more than one area of specialization will be preferred. (iii) Retired Government employees with (i) grade pay of Rs.7600/- and above &amp; (ii) at least 10 years’ experience in the required domain field would also be eligible for this position.</td>
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<tr>
<td>Focused attention to vulnerable areas including over-exploited areas</td>
<td>(i) Professionals having a Masters Degree in geology, hydrology, hydrogeology, environmental sciences, or B.Tech, or equivalent in a field/subject related to water resources. Desirable: Persons with M.Tech or additional qualifications, research experience, published Papers and post qualification experience in the relevant field would be preferred.</td>
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3.6 Desirable Experience/Knowledge: As infrastructure planning and design remains integral in devising water resource strategies for the vulnerable areas, experience in the fields of engineering research related to managing risk and uncertainty under climate projections is essential.

Exposure to climate change risk management is also needed. Strong ability to work in teams and multi-disciplinary/sectoral projects is required.
4.0 Goal 4: Increasing water use efficiency by 20%

4.1 Statement of Objectives- Terms of Reference for Goal 4 include:

A. For Young Professionals:

4.1.1 Facilitate and Encourage research in area of increasing water use efficiency and maintaining its quality in agriculture, industry and domestic sector

4.1.2 Incentivize recycling of water including wastewater
   a. Preparation of guideline for encouraging PPP model for recycling and wastewater treatment
   b. Provide technical and financial support for common wastewater treatment and recycling plants
   c. Strict enforcement of provisions in respect of wastewater treatment

4.1.3 Development of Eco-friendly sanitation system

4.1.4 Improve efficiency of urban water supply system
   a. Initiate benchmark studies for urban water use and introduce concept of water efficiency index for urban areas.
   b. Develop knowledge bank for urban water supply and use.
   c. Adopt volumetric metering for urban water supply
   d. Water supply system to be made sustainable through appropriate pricing.

B. For Consultants:

4.1.5 Efficiency labeling of water appliances and fixtures

4.1.6 Promotion of water efficient techniques and technologies
   a. Micro irrigation techniques
   b. Farmers’ Participatory Action Research Programme

4.1.7 Undertake Pilot projects for improvement in water use efficiency in collaboration with States

4.1.8 Promote Water Regulatory Authorities for ensuring equitable water distribution and rational charges for water facilities

4.1.9 Promote mandatory water audit including those for drinking water purposes
   a. Preparation of guidelines and manuals

4.1.10 Adequate provision for operation & maintenance of water resources projects

4.1.11 Incentivize through award for water conservation & efficient use of water

4.1.12 Incentivize use of efficient irrigation practices and fully utilize the created facilities
4.2 Position Overview

The Consultant for Goal 4 would direct efforts covering various elements of ToR listed above and provide leadership of the Goal 4 under the overall Mission’s strategy. The person will ensure that activities listed under Goal 4 deliver.

4.3 Outline of Tasks to be carried out - Duties and Responsibilities

- Lead efforts under Goal 4 of the National Water Mission
- Maintains recognition both at the National and State levels by ensuring delivery on the objectives listed under Goal 4.
- Ability to provide strategic guidance on increasing agriculture water use efficiency for increasing food and water security covering aspects related to micro irrigation systems, minimizing evaporation losses, soil moisture optimization, groundwater storages, conjunctive water use, encouraging re-use of return water from irrigation, modernization of canals, farmer participation action etc.
- Ability to provide strategic guidance on increasing industrial water use efficiency covering aspects related to reduction in fresh water use, wastewater recycling and reuse, zero liquid discharges etc.
- Ability to provide strategic guidance on increasing urban water use efficiency covering aspects related to water efficiency indexing, use of PPP and institutional arrangements for municipal water and wastewater treatment, optimization of fresh water use, leak detection and control, volumetric metering and rationalization of water pricing etc.
- Facilitate strategies/mechanisms and measures through implementation of pilots and demonstration projects for improving water use efficiency covering
  - technologies that are economically viable,
  - sectoral and cross-sectoral policies and reforms that incentivise beneficiaries directly (e.g. reducing water use by incentivising energy savings in groundwater irrigated areas)
  - recognizing good efforts through water awards,
  - eco or efficiency labelling of water appliances and fixtures.
- Manage resources in accordance with the policies and applicable regulations of the Ministry of Water Resources, Government of India.
• Takes overall responsibility for the management and development of resources (including human as well as financial resources) and ensures effective implementation and reporting in cooperation with NWM’s Office, and as per the applicable rules and regulations.
• Communicate effectively to disseminate key outcomes of Goal 4 of NWM
• Represents NWM in conferences and act as spokesperson on issues related to Goal 4 of NWM.

4.4 Skills and Qualifications

• Understanding of development challenges especially those related to Goal 4.
• Should have working knowledge on the following aspects:
  a. Use of ecosystems model for designing strategies leading to improving water use efficiency in various sectors covering industry, agriculture and urban water supply.
  b. Use and application of integrated or optimization tools and techniques that minimize fresh water use and maximize wastewater recovery in various sectors
  c. Technology adoption through implementation of decision support frameworks.
• Demonstrate experience of working on multi-disciplinary subjects covering water and sanitation, integrated water and wastewater management, finance, and reforms.
• Ability to establish and maintain effective working relationships with various stakeholders and work in multi-disciplinary teams
• Strong planning, communication and liaison skills
• Strong reputation as a key contributor to one or more of the areas mentioned in the ToR and associated with the position as evidenced by a strong track record, publications, and other acknowledgements.
• Demonstrate experience in fostering innovation and clear understanding of impact pathways (use of Decision Support Systems/ Integrated modeling tools).
• Strong planning, communication and liaison skills
• Ability to integrate both qualitative and quantitative data analysis
### 4.5 Education and experience

<table>
<thead>
<tr>
<th>Goals of NWM</th>
<th>Minimum Qualifications for Young Professionals</th>
<th>Qualifications for Consultants</th>
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<tbody>
<tr>
<td>Goal IV</td>
<td>Essential:</td>
<td>(i) Professionals having a Masters degree or B Tech in relevant subject and minimum post qualification experience of 10 years in the requisite field. For very bright candidates, the Evaluation Committee would be competent to relax the post qualification experience requirement upto 5 years. Cross-disciplinary qualifications that cover more than one area of specialization will be preferred. (iii) Retired Government employees with (i) grade pay of Rs.7600/- and above &amp; (ii) at least 10 years’ experience in the required domain field would also be eligible for this position.</td>
</tr>
<tr>
<td>Increasing water use efficiency by 20%</td>
<td>(i) Professionals having Masters Degree in hydrology, environmental sciences, social sciences or B.Tech, or equivalent in field/subject related to water resources. Desirable: Persons with M.Tech or additional qualifications, research experience, published Papers and post qualification experience in the relevant field would be preferred.</td>
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### 4.6 Desirable Experience/Knowledge:

Practical on-ground experience to improving water use efficiency across sectors is essential that should cover use of technologies, policies and reforms in an integrated manner. Strong ability to work in teams and multi-disciplinary/sectoral projects is required.
5.0 Goal 5: Promotion of basin level integrated water resources management

5.1 Statement of Objectives- Terms of Reference for Goal 5 include:

A. For Young Professionals:

5.1.1 Review of National Water Policy in consultation with States with the view to ensure basin level management strategies to deal with variability in rainfall and river flows due to climate change

5.1.2 Review of State Water Policy

5.1.3 Guidelines for different uses of water e.g., irrigation, drinking, industrial etc. particularly in context of basin wise situations

B. For Consultants:

5.1.4 Planning on the principle of integrated water resources development and management

5.1.5 Inter-basin integration particularly for augmenting water by converting surplus flood water into utilisable water

5.1.6 Ensuring convergence among various water resources programmes

5.2 Position Overview

The Consultant for Goal 5 would direct efforts covering various elements of ToR listed above and provide leadership of the Goal 5 under the overall Mission’s strategy. The person will ensure that activities listed under Goal 5 deliver.

5.3 Outline of Tasks to be carried out - Duties and Responsibilities

- Manage, coordinate and lead efforts towards achievement of Goal 5 of the NWM
- Lead efforts under Goal 5 of the NWM
- Identify issues and solutions towards promotion of basin level integrated water resources management
- Ensure coordination/consultation amongst stakeholders for revisiting the National Water Policy to ensure basin level management strategies to deal with variability in rainfall and river flows due to climate change
- Manage resources in accordance with the National Water Mission to ensure more equitable distribution both across and within States
- Prioritize watersheds vulnerable to flow changes and develop decision support systems to facilitate quick and appropriate responses.
• Develop guidelines for different uses of water in accordance with the National Water Policy. This could include options such as:
  a. encouraging water harvesting
  b. use of piped surface water for clusters of villages with ground water quality problems
  c. use of dual pipe supply systems to conserve water with due consideration to simultaneous planning for sewerage lines in urban areas to ensure prevention of pollution of water sources,
  d. encouraging leakage control programmes
  e. consideration of desalination as an option, for supply to urban coastal communities
  f. regulation for in-house water withdrawals of industries, through royalties and licenses
  g. extending incentives for recycling and recovery of wastewater
  h. revise water tariff based on cost recovery principle
• Promote Inter-basin integration particularly for augmenting water by converting surplus flood water into utilizable water. This would entail implementation of projects after evaluating costs and assessing land acquisition problems.

Uptake and communications to ensure outputs have high impact
• Responsible for working closely with various Departments for ensuring convergence among various water resources programmes for achievement of Goal 5 of the NWM.
• Communicate effectively at regional, state and national levels to disseminate the key outcomes of Goal 5.

5.4 Skills and Qualification
• Should possess a clear understanding the challenges for promotion of basin level integrated water resources management
• Should be able to assist stakeholder discussions on National Water Policy, State Water Policies and provide policy advice as required.
• Strong ability to interact with States ensure integrated water resource management helping to conserve water, minimize wastage and ensure more equitable distribution both across and within States
- Demonstrate skills in guiding different users of water e.g. drinking, industry and domestic particularly in the context of basin wise situations.
- Strong planning, communication and liaison skills
- Ability to integrate quantitative and qualitative data analysis.

5.5 Education and experience

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5.6 Desirable Experience/Knowledge:

As basin level integrated water resources management and planning remains integral in devising water resource strategies as well as policies and programs across various line departments, experience in the fields of policy analysis, and integrated resource planning is essential.

Exposure to climate change risk management is also needed. Strong ability to work in teams and multi-disciplinary/sectoral projects is required.

Further details are included in the Volume – I and II of the National Water Mission under National Action Plan on Climate Change Document available on the website of the Ministry of Water Resources.  
Application format for appointment as Young Professional/Executive Assistants Consultant in the National Water Mission, Ministry of Water Resources, River Development & Ganga Rejuvenation Government of India

1. Name:

2. Father's Name:

3. Date of Birth:

4. Domicile:

5. Nationality:

6. Mailing address (with Tel./Mob. No. and E-mail address)

7. Permanent address

8. Educational Qualification:

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<th>Course</th>
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<th>University/Institute</th>
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<th>Division/Class</th>
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9. Work Experience

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10. Whether SC/ST/OBC:

11. Reference:

(i)

(ii)

(Signature)

Date