

REQUIRED DOCUMENTS:

Nomination form;

Nominee's Curriculum Vitae/brief Biography

A photo of nominee (image must be larger than 250*300 pixels)

The DEADLINE: 21 August, 2020

Nominee's Photo



NOMINEE'S DETAIL/INFORMATION:

SCO Country: **PAKISTAN**

Last Name: **MASOOD**

First Name: **AMJAD**

Date of Birth (Day/Month/Year): **September 07, 1981**

Passport Number: **BB0878163** (Date of Issue: **01 JAN 2019** and Expiry Date: **31 DEC 2028**)

Address: **Global Change Impact Studies Centre (GCISC), 6th level, Emigration Tower, 10-Mauve Area, G-8/1, Islamabad, Pakistan**

Telephone: **+92-51-9262717, +92-300-4576605**

Email: **amjadmasood06@gmail.com, amjad.masood@gsic.org.pk**

Title: **Dr.**

Gender: **MALE**

Institution/Affiliation: **WATER RESOURCES AND GLACIOLOGY SECTION, GLOBAL CHANGE IMPACT STUDIES CENTRE (GCISC), ISLAMABAD, PAKISTAN**

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Field of Science and Technology: **Hydrology and Water Resources Management in context of climate change**

ACADEMIC QUALIFICATION:

PhD (HYDROLOGY AND WATER RESOURCES MANAGEMENT)

Nomination Statement (up to 300 words): Please describe area of expertise in which the nominee has demonstrated innovation excellence. Please information in English.

Dr. Amjad Masood is working as a Scientific Officer in Water Resources and Glaciology Section of Global Change Impact Studies Center (GCISC), Pakistan. He is a hydrologic engineer with his PhD in Hydrology and Water Resources Management, focused on groundwater modeling, in the context of climate change, in the arid regions of Saudi Arabia. He has more than 15 years of professional experience in the field of hydrology and water resources management. His skills are extended from mountain hydrology to groundwater hydrology. He participated in many national and international expeditions; specifically, he was a part of international team to assess the dynamics of Imja glacial Lake, the world's highest studied glacial lake in Mount Everest region, in 2011. He has been contributing in many national and international research projects regarding hydrology and water resources management in the context of climate change.

Innovative Project Statement (up to 300 words): Please provide brief information on the nominee's innovative idea. Please information in English.

The nominee, Dr. Amjad Masood did his PhD research work with an innovative idea by involving / inter linking atmosphere, surface water and groundwater through hydro-climate modeling for arid regions of Saudi Arabia.

Participation in Innovation Competitions/Awards/Achievements: Please list previous participation in innovation competitions and awards/achievements, if any. Please provide information in English.

Dr. Amjad Masood won the scholarship award for PhD in 2012 in Hydrology and Water Resources Management, Department of Hydrology and Water Resources Management, King Abdulaziz University, Saudi Arabia and successfully completed his doctorate in 2016 and joined back his duties in GCISC, Ministry of Climate Change, Government of Pakistan.

Besides, Dr. Masood participated in many national and international expeditions; specifically, he was a part of international team to assess the dynamics of Imja glacial Lake, the world's highest studied glacial lake in Mount Everest region, in 2011.

DECLARATION BY THE CANDIDATE:

I hereby declare that all the information given above is true to the best of my knowledge. I undertake to accept the offer to participate in the 1st SCO Young Scientist Forum in India, and will attend the full the programme of five days and will not seek any personalized programme during the visit.

PLACE: ISLAMABAD, PAKISTAN

DATE: 21 August 2020



SIGNATURE OF THE NOMINEE: _____

Dr. Amjad Masood

Scientific Officer
Global Change Impact Studies Centre (GCISC),
Ministry of Climate Change,
Government of Pakistan
6th Floor, Emigration Tower
10-Mauve Area, G-8/1, Islamabad, Pakistan
Tel: +92-51-9262704-05 Ext: 125
Cell: +92-300-457 6605
Email: amjadmasood06@gmail.com,
amjad.masood@gcisc.org.pk
Web: www.gcisc.org.pk

NAME OF THE NOMINATING AUTHORITY (with contact details, i.e. telephone, email and designation)

PLACE: Islamabad, Pakistan

DATE: 21 August 2020

SIGNATURE: _____



T. COL(R) KHALID MAHMOOD
Director Admin and Finance
Global Change Impact Studies Centre
Ministry of Climate Change
Government of Pakistan, Islamabad

NB: Remember to include the following on the Nomination Form:

- Nominee's Curriculum Vitae/Biography
- Photo of Nominee (image must be larger than 250*300 pixels)

Dr. AMJAD MASOOD

(Ph.D. Hydrology and Water Resources Management)

Cell # +92-300-4576605, +92-306-1553436

Tel. # +92-51-9262717

Fax # +92-51-9262722

E-mail: amjadmasood06@gmail.com , amjad.masood@gcisc.org.pk

Postal Address: Global Change Impact Studies Centre, 6th level, Emigration Tower, 10-Mauve Area, G-8/1, Islamabad, Pakistan

Permanent Home Address: Dab No.1, Behind Aara Machine, Dab Road, Mansehra, Hazara, Pakistan



FIELD OF EXPERTISE AND INTEREST:

- Climate Change Impacts on Water Resources
- Groundwater Modeling
- Remote Sensing and GIS in Hydrology & Water Resources
- Analysis of hydrological extreme events in context of climate change
- Snow and Glacier Runoff Modeling
- Rainfall-runoff Modeling

PERSONAL INFORMATION:

- **Name:** Amjad Masood
- **Father's Name:** Sheikh Ahmad
- **Date of Birth:** September 07, 1981
- **Nationality:** Pakistani
- **CNIC No.:** 13503-4543816-9
- **Passport No.:** BB0878163

ACADEMIC RECORD:

1. **PhD (2016);** Hydrology and Water Resources Management, King Abdulaziz University, Jeddah, Saudi Arabia
2. **M.Sc. (2006);** Engineering Hydrology, CEWRE, UET, Lahore, Pakistan
3. **B.Sc. (2003);** Agricultural Engineering, UET, Peshawar, Pakistan
4. **F.Sc. (1997);** Pre-Engineering, BISE Abbottabad, Pakistan
5. **Matriculation (1995);** Science, BISE Abbottabad, Pakistan

PROFESSIONAL MEMBERSHIP:

1. **PEC (Pakistan Engineering Council) Registration No. AGRI/2290**

PRACTICAL EXPERIENCE:

1. Work experience with "Global Change Impact Studies Centre" Islamabad, Pakistan.

Designation: **Scientific Officer**

From **December 01, 2016 to present**

and from July 29, 2008 - to- September 07, 2012

Job Description:

- Snow and Glacier runoff modeling in Hindukush-Karakoram-Himalaya (HKH) region, Pakistan, using Hydrologic / Watershed Models and RS/GIS Tools.
 - Post-processing of RCMs (PRECIS/RegCM4) output to prepare input data for hydrological models.
 - Assessment of future water availability in the rivers of Indus Basin under different climate change scenarios by off-line coupling of hydrological models (UBC and SRM) with Regional Climate Model (PRECIS and RegCM4).
 - Evaluation of groundwater resources of Pakistan through groundwater modeling in context of climate change through MODFLOW and allied modeules.
2. Ph.D. Scholar: From **September 10, 2012 - to - November 17, 2016**

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Ph.D. Research Title "Climate Change Impacts on Water Resources of Saudi Arabia (Case Study of Wadi Al Lith)"

Job Description:

- Calibration and Validation of Surface and Groundwater Hydrologic Models
- Generation of future hydro-climate scenarios
- Climate change impacts on water resources
- Evaluation of groundwater resources
- Evaluation of hydro-climate models' strength in the arid region of Saudi Arabia in context of climate change

3. Work experience with "**Pakistan Council of Research in Water Resources, Ministry of Science and Technology**" Peshawar, Pakistan.

Designation: **Assistant Director**

From **April 23, 2005** to **July 22, 2008**

Job Description:

- Carry out hydrometeorological data collection and analysis.
- Field survey and design of water conveyance channels.
- Installation and operation of high altitude weather station in Northern Areas
- Field Work for Monitoring of Glaciers and Rejuvenation of glaciers by using remote sensing/GIS.
- Conducting research on different water resources issues/problems.
- Preparation of project reports, monthly and quarterly progress reports.
- Carry out the design and construction of slope terraces.
- Preparation of various natures of tender documents.
- Design and installation of pressurized irrigation systems.
- Inspection and supervision of civil works etc.
- Water sampling and water quality analysis
- Layout Design of water distribution system for irrigation purposes in mountain areas and installation of Hydraulic Ram pumps where appropriate.

4. Work experience with "**On Farm Water Management Department**" District Mansehra, Pakistan.

Designation: **Water Management Officer**

From **January 15, 2005** to **April 22, 2005**

Job Description:

- Make the feasibility reports.
- Organize water user associations.
- Carry out field profiles and topographic surveys.
- Prepare the layout and design of water conveyance channels.
- Preparations of cost estimates and make payments to the contractors.
- Supervision of various construction works etc.

5. Work experience with "**AGES Consultants**" in District Peshawar, Pakistan

Designation: **Irrigation Engineer**

From **September 25, 2003** to **January 14, 2005**

Job Description:

- Field profile and topographic survey
- Socioeconomic base-line survey
- Quantity estimation
- Planning and designing etc.

MAJOR SUBJECTS STUDIED in BS to PhD:

1. Surface Water Hydrology
2. Groundwater Hydrology
3. Snow and Ice Hydrology
4. Stochastic Hydrology
5. Climate Change
6. Remote Sensing Application in Water Resources
7. GIS application in hydrology
8. Watershed modeling
9. Integrated water resources management
10. Flood-and Drought-management
11. Soft Computation and Simulation in Water Resources
12. Risk Analysis in Water/Environmental Systems
13. Irrigation Engineering
14. Reservoir Operation
15. Soil Mechanics
16. Advanced Hydraulics
17. Environmental Engineering
18. Environmental Impact Assessment

MODELING AND COMPUTER SKILLS:

Hydrological modeling Software	MODFLOW, Modelmuse, WMS, HEC-HMS (hydrological Modeling System), HEC-RAS, SURFER, GW-Chart, HD Model (Hydrological Discharge Model), UBC (University of British Columbia) Watershed Model, TOPKAPI (TOPographic Kinematic Approximation and Integration) Watershed Model, YHyM/BTOPMC (University of Yamanashi Hydrological Model),
Climate Modeling Software	RegCM4 (Regional Climate Model), WRF (Weather Research and Forecasting) Climate Model, PRECIS
Remote Sensing and GIS Software:	ERDAS IMAGINE, ArcGIS, ILWIS (GIS Software)
Data Visualization Software:	GrADS, GW-Chart
Statistical Software:	Minitab, SPSS, STATISTICA, R
Water Management Software:	Super cal (Channel Design software)
Microsoft office:	MS Word, MS Excel, MS Power Point
Operating System	Windows, Linux, DOS
Computer Language	C, C++, Fortran
Engineering Software	AutoCAD (Auto Computer Aided Design)

STUDIED PROJECTS (Ongoing and Completed):

- 1) GLOF and Climate Change Vulnerability and Risk Assessment for Small Hydropower Projects (**Ongoing**).
- 2) Understanding our Joint Water-Climate Change Challenge and Exploring Policy Options for Cooperation on the Afghan-Pak Trans-boundary Kabul River Basin- Cycle-4, GCISC –LEAD Pakistan Project (**Ongoing**).
- 3) Using water resources system analysis to guide transboundary Kabul River water partnership, USAID funded 3-year project, leading the hydrological modeling studies (**ongoing**).
- 4) Runoff Scenario and Water Based Adaptation Strategies in South Asia, GCISC-APN Project (**recently completed**).
- 5) Climate Change Impacts on Water Resources of Saudi Arabia; Case Study of Wadi Al Lith, (PhD Thesis Project, **completed**).
- 6) Result Oriented Short Term Research Studies to Improve Water Resources of Mountainous Areas, PCRWR Project (**Completed**).
- 7) Improved Water Conservation Practices for NWFP and Northern Areas of Pakistan, PCRWR Project (**completed**).
- 8) Investigation of variation of Runoff Regimes and the Linkage between Climatic Variables and River Flow in Swat River (MS Project, **completed**).
- 9) Study on Dehydration of Vegetables and Fruits in N.W.F.P and to Design a Solar Dehydrator (BS Project, **completed**).

PUBLICATIONS:

1. Muhammad Zia ur Rahman Hashmi, **Amjad Masood**, Haris Mushtaq, Syed Ahsan Ali Bukhari, Burhan Ahmad, Adnan Ahmad Tahir, "Exploring climate change impacts during 1st half of the 21st century on flow regime of the transboundary Kabul River in the Hindukush region", **Journal of Water and Climate Change** (2019), jwc2019094. doi: <https://doi.org/10.2166/wcc.2019.094>.

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2. **Amjad Masood**, Jarbou Bahrawi & Amro Elfeki, "Modeling annual rainfall time series in Saudi Arabia using first-order autoregressive AR(1) model", **Arabian Journal of Geosciences** (2019) 12:191 <https://doi.org/10.1007/s12517-019-4330-3>.
 3. **Amjad Masood**, Muhammad Zia ur Rahman Hashmi, Haris Mushtaq, Spatio-Temporal Analysis of Early Twenty-First Century Areal Changes in the Kabul River Basin Cryosphere, **Earth Systems and Environment** (2018) 2:563–571 <https://doi.org/10.1007/s41748-018-0066-6>.
 4. Khaled S. Balkhair, **Amjad Masood**, Mansour Almazroui, Khalil Ur Rahman, Omar A. Bamaga, Ahmed S. Kamis, Iqbal Ahmed, Mohammed I. Al-Zahrani, K. Hesham, Groundwater share quantification through flood hydrographs simulation using two temporal rainfall distributions, **Desalination and Water Treatment** 114 (2018), 109-119, <https://doi:10.5004/dwt.2018.22346>.
 5. Almazroui, Mansour, Nazrul Islam, M., Balkhair, Khaled S., S_{en}, Zek^{ai}, **Masood, Amjad**, Rainwater harvesting possibility under climate change: A basin-scale case study over western province of Saudi Arabia, **Atmospheric Research** (2017), <https://doi:10.1016/j.atmosres.2017.01.004>.
 6. Khalil Ur Rahman, Khaled S. Balkhair, Mansour Almazroui, **Amjad Masood**, Sub-catchments flow losses computation using Muskingum-Cunge routing method and HEC-HMS GIS based techniques, case study of Wadi Al-Lith, Saudi Arabia, **Modeling Earth Systems and Environment Journal** (2017) 3:4, <https://DOI:10.1007/s40808-017-0268-1>.
 7. Muhammad Tousif Bhatti, Khaled S. Balkhair, **Amjad Masood** and Saleem Sarwar. Optimized shifts in sowing times of field crops to the projected climate changes in an agro-climatic zone of Pakistan, **Experimental Agriculture** (2016), available on CJO2016. <https://doi:10.1017/S0014479716000156>.
 8. Khaled Balkhair, Khalil Ur Rahman, Mansour Almazroui, **Amjad Masood**, Omar Bamaga, Ahmed Kamis, Rainwater harvesting in arid regions using coupled Analytical Hierarchy Process, GIS, and RS techniques, submitted to **Arabian Journal of Geosciences**.
 9. **Amjad Masood**, 2015, Statistical Analysis and Prediction of Rainfall for Some Parts / Stations in Saudi Arabia, Conference paper in 7th Scientific Forum of King Abdulaziz University, Saudi Arabia, **15-18 November, 2015**.
 10. **Amjad Masood**, 2013, Assessment of Historical River Flows and Climatology of Upper Indus Basin (UIB) and to develop relationship between river flows and climatic variables in UIB: Case Study of Swat River Basin, Conference Paper in 5th Scientific Forum of King Abdulaziz University, Saudi Arabia, **November, 2013**.
 11. Shah, S.M.S.; Kaleem, M.; **Masood, Amjad**, Investigation of the linkage between climatic variables and the flows Swat river, - inis.iaea.org; **Journal of Science Technology and Development** (2011); ISSN 0254-6418; v. 30(4); p. 44-55.
 12. Expedition Clip Book: **Imja Lake Everest Region, Nepal**; September 3- 23, 2011; available at <http://www.slideshare.net/glacierchangeosu/imja-lake-clip-book> (Part of team).
 13. **Amjad Masood**, 2011, Short Paper titled as "Present Status of Glaciers in Pakistan" published in Proceedings of International Workshop on "Knowledge Sharing for Effective Risk Management of Hydro-meteorological Hazards in the Hindu-Kush-Himalayan Region" from 21-23 March 2012 in Kathmandu, Nepal.
 14. **Amjad Masood**, S.M.S. Shah, M.A Malik, G.D Khan, Samar Gul and Ikramul Haq, Collective and individual month-wise data management approach on the data collected in kalam (swat) through multiple regression analysis, **Sarhad J. Agric.** 2009, Vol.25, No.4, 2009.

PARTICIPATION IN INTERNATIONAL AND NATIONAL WORKSHOPS/SEMINARS:

International:

- 1) South Asia Hydromet Forum-II, held at Hyatt Regency Hotel, Kathmandu, Nepal, from 19-21 November, 2019.
- 2) Regional Workshop on Climate Services for Water and Hydropower in South Asia held at ICIMOD, Kathmandu, Nepal, from 24-26 September, 2019.
- 3) Regional Workshop on Himalayan GEOSS, Kathmandu, Nepal, 10-11 August, 2017.
- 4) Seventh Scientific Forum for King Abdulaziz University students, Jeddah Saudi Arabia, November, 2015.
- 5) Fifth Scientific Forum for King Abdulaziz University students, Jeddah Saudi Arabia, November, 2013.
- 6) International Workshop on "Knowledge Sharing for Effective Risk Management of Hydro-meteorological Hazards in the Hindu-Kush-Himalayan Region" from 21-23 March 2012 in Kathmandu, Nepal.

- 7) International Workshop on "Adapting to a Changing Mountain World" from 3-28 September, 2011; field expedition of scientists and graduate students to the Imja Glacial Lake, Sagarmatha (Everest) National Park, followed by Kathmandu Workshop on adapting to the mountain world and a writer's workshop in Kathmandu, Nepal.
- 8) Training Course on "Regional Climate Models and Downscaling Procedures for Climate Change Impacts" from 28-November, 2010 to 20-December, 2010 in Newcastle University, Newcastle, United Kingdom.
- 9) International Workshop on "CoCooN – Conflict and Cooperation on Natural Resources in Developing Countries" from September 29-30, 2009, at Hanoi, Vietnam.
- 10) International Training Workshop on "Water Resources in Developing Countries: Planning and Management in a Climate Change Scenario" from April 27 to May 08, 2009 at AS-ICTP, Trieste, Italy.

National:

1. Consultation workshop on impact-based forecasting in Pakistan, organized by UK MET Office and ICIMOD at Serena Hotel Islamabad from 25-27 November 2019.
2. International Conference on Emerging Trends in Engineering, Management and Sciences, organized by KIU Gilgit, 10-11 November 2018.
3. Climate Change Adaptation Policy and Science Conference – Lessons, Achievements and way forward under Hi-Aware Project, CEWRI, NARC, Islamabad, Marriot Hotel, 2nd October 2018
4. International Conference on Seawater Desalination For Water Supply And Agricultural Applications - Options for Pakistan, PPMI Complex, St.1, H-8/1, Islamabad, 24th May, 2018
5. Flood Management through Flood Early Warning and Forecasting System, Sangam Hall, Hotel Margalla, Islamabad, 2-4 May 2018
6. "Preparing rural communities to cope with climate change through South-South and Triangular Cooperation" by IFAD with GCISC assistance, Serena Hotel, Islamabad, 14 March 2018
7. United Nations/Pakistan/PSIPW 4th International Conference on Space Technology for Water Management hosted by SUPARCO on behalf of the Government of Pakistan, Serena Hotel, Islamabad, 26 Feb - 02 Mar 2018
8. Workshop on Role of Ulema in Climate Change Awareness held at Daawah Academy, Faisal Mosque, Islamabad, 28-December, 2017.
9. Science Policy Conference on Climate Change (SP3C), Marriott Islamabad, 18-20 December 2017.
10. Field Assessment for climate change adaptation at local level in the Gilgit watershed, Ghizar, Gilgit, 19-26 July, 2017.
11. Training Workshop on Springshed Management in HKH Region, NARC /PARC Islamabad, 17-19 May 2017.
12. National workshop on Pakistan's Achievement of Water Related SDGs was held at the Pakistan Council of Research in Water Resources (PCRWR), PCRWR, Islamabad, 14-15 March 2017.
13. International Seminar on Managing Indus Basin for Sustainable Development, Food Security and Poverty Alleviation, CEWRE, UET Lahore, 13 April 2017.
14. A Seminar by IG Forest (ED GCISC) on "Recent developments in UNFCCC COP22", PIDE Islamabad, 07 December 2016.
15. International workshop on "Climate Change and Sustainable Management of Water Resources in the Asia-Pacific Region" from 22-24 November, 2011, NIBAF, Islamabad, Pakistan.
16. National Workshop on Stakeholders Consultations for Preparation of SNC to UNFCCC, organized by GCISC at Pakistan Academy of Sciences, 27-28 July, 2011, Islamabad, Pakistan
17. National Workshop on Stocktaking of GHG Inventory Development in Pakistan, organized by GCISC at Pakistan Academy of Sciences, 25 June, 2011, Islamabad, Pakistan
18. National Seminar on "The dialogue session on Pakistan-From Food Bowl to Dust Bowl" organized by NUST School of Civil & Environmental Engineering in collaboration with UNESCO at National University of Sciences and Technology (NUST), in Islamabad, Pakistan on 20th June, 2011
19. International Conference on "Climate Change and Development", on 21-22 October, 2010 at Serena Hotel, Islamabad, Pakistan.

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20. National Workshop on "Application of Isotope Techniques in Water Resources Research and Management", on 4-7 October, 2010, at PINSTECH, Islamabad, Pakistan.
 21. Training Workshop on "Stream Flow Measurement using Fluorescent Tracer" on 25-27 September, 2010 at Margalla Hotel and EPA building, Islamabad, Pakistan.
 22. Training Workshops on "Snow and Glacier Runoff Modeling in the Indus Basin" on 20-23 September, 2010 and 8-12 March 2010 at Hotel Margala, Islamabad, Pakistan.
 23. Seminar on "Climate Change: Role of the Clean Development Mechanism" by Mr. Shafqat Kakakhel (CDM Executive Board) on June 3, 2009 at Pakistan Institute of Development Economics (PIDE), Islamabad.
 24. "Inception Workshop on National, Economics, Environment and Development Study (NEEDS) for Climate Change" on May 27, 2009 organized by Ministry of Environment at Marriot Hotel in Islamabad Pakistan.
 25. National Training Workshop on "Changing Climate: Exploring Adaptation Strategies for Pakistan" from January 12-16, 2009 at LEAD House, Islamabad, Pakistan.
 26. GIS and Remote sensing Application Workshop on June 25th – 26th, 2008 at PCRWR, Islamabad, Pakistan.
 27. Inception Workshop on National, Economics, Environment and Development Study (NEEDS) for Climate Change" on May 27, 2009 organized by Ministry of Environment.
 28. Seminar on "Climate Change: Role of the Clean Development Mechanism" by Mr. Shafqat Kakakhel (CDM Executive Board) on June 3, 2009 at Pakistan Institute of Development Economics (PIDE), Islamabad.
 29. Seminar on "The Purpose and Value of Research" on September 23, 2006 held at NWFP UET, Peshawar, Pakistan.
 30. On Farm Water Management Training from 16-12-2004 to 13-01-2005 held at Department of Water Management, NWFP Agriculture University, Peshawar, Pakistan.

COMMUNICATION SKILLS:

1. Excellent in interpersonal managing communication.
2. Good Knack in presentation.
3. Excellent command in oral and written English.

REFERENCES:

References can be provided on demand