Senior Agro-Climate Modeler, Asia Risk Centre

Asia Risk Centre (ARC) is the leading provider and developer of analytics and risk quantification software to manage agriculture risks. ARC's clients are insurance companies, reinsurers, brokers, hedge funds and government institutions that have a need to better understand their exposure to agricultural risk and/or to build new agriculture insurance schemes.

ARC is an affiliate of Risk Management Solutions (RMS) which is the world's leading catastrophe model provider for manmade and natural catastrophes and many of our employees come from RMS including some of the best lead modelers and software architects. ARC has offices in Singapore, California, China and India. ARC is concentrating agro-climate modelling and analytics in London taking advantage of the local talents and expertise in numerical modelling.

ARC's current models include the China Agriculture Risk Model covering crops, livestock and forestry, the India Agriculture Risk Model covering yield- and weather index portfolios and Agro Risk Metrics which allows insurers pricing and management of index-based insurance schemes.

We are currently seeking an **Agro-Climate Modeler** to join our product development team in **London (UK)** who will contribute to the further development of our suite of models and expansion to other countries in South America, North America and Africa as well as supporting our clients in advanced analytics. The seniority level will be dependent on the level of expertise of the successful candidate. The position will require occasional short time travels within Europe and to California.

The candidate will be a very dynamic individual with the ability to work in a fast-paced high energy and multidisciplinary team with other modelers and developers. The candidate will have a proven track record in climate and agriculture research and operational activities. A constant drive to be creative and innovative in utilizing his/her knowledge to come up with efficient solutions satisfying the needs of clients is essential. The role will require research, identification and application of suitable methods for various modeling initiatives, including but not limited to crop yield forecasts, climate forecasts and/or the integration of weather forecasts and crop forecast models, analysis of impacts of climate change as well as manipulation and statistical evaluation of large data sets.

The successful candidate will develop and/or improve crop risk models and constructively review his/her work and those of others in the development group to deliver reliable and high standard output within mutually agreed timelines with ARC's Product Managers. Presentation of methodologies and results to the wider development team to solicit feedback and to assure consistency with requirements is an integral part of the job.

The ideal candidate has a strong background in agriculture science, agriculture modeling, climatology/meteorology, statistics, mathematics, physics or environmental science. The candidate will be given opportunities to publish his/her relevant work in conferences and publications.

Essential Job Functions:

- Developing agriculture model methodologies and components, testing results using standard research criteria and validating loss results against insurance claim data in a development environment (e.g., R, FORTRAN, Visual Basic, C++, etc.).
- Acquiring and processing data (climate, agriculture, etc.) relevant to the development of agro-climate risk models

- Drafting model documentations and interacting with ARC's Product Managers to articulate modeling methodologies that will satisfy the needs of clients.
- Researching and sourcing agriculture risk proxies, including weather data, agriculture production data, and hazard data and understanding agriculture risk management practices.
- Keeping track of developments in the agriculture research communities.
- Attending and presenting results and model methodologies at relevant scientific conferences in the domain of agriculture risk management.
- Assisting ARC's Business Development and Sales teams in developing documentations and marketing presentations.

Job Requirements:

ARC expects that the candidate for this position will be passionate, a strong team player, self-motivated and focused on quality and timely delivery. In addition, to be considered for this position, the candidate must meet the following *minimum requirements*:

- PhD in agricultural science/modeling, climatology/meteorology, statistics, mathematics, physics, environmental science or related disciplines from a reputable university. Published peer-reviewed papers in the domain of the candidate's expertise are important.
- Experience using and/or developing crop models, including statistical and/or process-based models.
- High knowledge and proficiency in probability and statistics including the use of tools such as FORTRAN, C, C++, MATLAB, Visual Basic and/or statistical software packages such as R, S-plus or SAS.
- Proficiency in the use of GIS software such as ESRI Arc GIS.
- Demonstrated strong problem-solving skills.
- Excellent written and verbal skills in English, as evidenced by technical presentations.
- Team player with a high degree of self-motivation who will take responsibility of his/her work and be able to communicate ideas and concepts to colleagues in a multi-cultural and multidisciplinary environment.

Did you know that China's agriculture output is three times higher than the one of the US? Does it surprise you that 170 million farming households are currently benefiting from crop insurance and that still many farms are not insured in China? Would you imagine that a severe drought in China could cause insured losses of USD 1 billion and that forest fires can destroy 7% of forest area in a Chinese province? Is it hard to imagine that an epidemic livestock disease can decimate the livestock population in a province by 20%? Do you perceive building a risk model for China's vast aquaculture industry an interesting challenge?

At ARC we build risk models that allow insurers, reinsurers, brokers and provincial governments to better understand risks from natural disasters (drought, flood, typhoon, hail, and forest fires) and epidemic livestock diseases. We are focused on applying the best technology and being the thought leader in the agriculture risk modeling industry. It is our vision and mission to contribute to more resilient societies in emerging markets with a focus on Asia. We collaborate with multilateral financing institutions, insurers, reinsurers and governments to develop new agriculture insurance schemes based on the most advanced risk quantification and modeling techniques. Through our association with the Tropical Marine Science Institute (TMSI) of the National University of Singapore (NUS) and through collaboration with other leading universities, we contribute to society and learning about catastrophe risk management practices in the agriculture domain.

To find out more, visit **www.asiariskcentre.com**.