



WORLD BANK BIG DATA INNOVATION CHALLENGE

Join us in rethinking climate resilience through big data solutions

Challenge Handbook

#bigdatainnovate

www.bigdatainnovationchallenge.org



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Join us in rethinking climate resilience through big data solutions



Summary

The World Bank is announcing a global call for big data solutions and prototypes that address climate change-related issues pertaining to food security, nutrition, landscapes, forestry and watersheds. We seek to identify and support the implementation of high-potential solutions and prototypes developed by academics, citizens, entrepreneurs, businesses, and nonprofits addressing these critical areas of sustainable development. These issues are high priorities in service to the World Bank's goals of ending extreme poverty and promoting shared prosperity, and are also identified priorities of the UN [Sustainable Development Goals](#).



Overview

Climate change is causing temperatures and weather patterns to shift, resulting in severe drought, wildfires, and water scarcity in some regions, and excessive rainfall and flooding in others. These shifts are causing seasonal and weather event-based shocks that are affecting the productivity of farms, decreasing food security, degrading water sources, harming forests, adversely affecting the built infrastructure, and permanently changing natural ecosystems that economies depend on to maintain life. The uncertainty in magnitude and time horizon of climate change, coupled with the lack of ability to fully predict and understand the ecological, social, and economic impacts poses significant challenges in building resiliency. Each year, millions of people are affected by climate-induced disasters, which in turn affect the ability of people to escape poverty.

Recent work from the World Bank suggests that poverty eradication is possible even as countries deal with the impacts of climate change and implement policies to reduce greenhouse gas emissions. However, this will require the appropriate development policies that take into account environmental and climate factors. Doing so is made particularly difficult by the lack of accurate data and by the inability to fully predict the future of socio-economic development and environmental and climate change. While there are many uncertainties about climate change, it is possible to inform decision-making given adequate tools.

In today's world of mobile technology, social networks, pervasive satellite and sensor information, and machine-to-machine transactions, more data has been generated in the past two years alone than in all of the previous years combined. Data is becoming the lifeblood of many economies, and data-informed decision-making is more important than ever before. However, the ability to use data in development and decision-making processes has not seen the same progress. Relying on data to inform decisions requires that the appropriate tools and analytical methodologies exist in order to use it effectively.

Natural resource planners, the agriculture industry, the insurance industry, infrastructure planners, urban planners, financial institutions and economists are calling for higher resolution, downscaled regional and sector-specific models to assist them in managing complex systems. There is a need to better synthesize and combine global, individual, household, local, geospatial and granular data to provide key insights that can be localized to the regional, town and village levels.

Citizens and organizations have a larger role to play than ever before in facilitating the understanding of local and global challenges, and enabling solutions that can solve them. Many new tools and data sources are available. This Innovation Challenge is focused on identifying and mobilizing big data sets, technology solutions and analytical methodologies to make development more rapid, more inclusive, and more resilient. The shift to climate-resilient economies can occur only if millions of dispersed decisions made on a daily basis start taking climate change factors and effects into account. The World Bank Innovation Challenge is structured in two challenge statements, the first one focusing on food (food security and nutrition) and the second one on landscapes (forestry and watersheds).



Food Challenge: Food Security & Nutrition

The Opportunity

One of the biggest ways in which climate change is affecting humanity is through the land and natural resources that we all depend on for food. Climate change will affect all four dimensions of food security: food availability, food accessibility, food utilization and food systems stability. It will have an impact on human health, livelihood assets, food production and distribution channels, as well as changing purchasing power and market flows. Its impacts will be both short term, caused by more frequent and more intense extreme weather events; and long term, caused by changing temperatures and precipitation patterns.

For the more than 2.5 billion people worldwide who directly depend on agriculture for their livelihoods, the availability of resources is a matter of survival. Impacts on agricultural production and prices—triggered by either gradual changes in long-term climate trends or more frequent and severe natural disasters—will affect poor people through food production impacts, higher consumption prices, and changes in rural incomes. Understanding and forecasting the agricultural production supply, quality and diversity, as well as where food loss is occurring across regions, are significant factors in reducing human, environmental, economic and food security impacts.

Nutrition is another critical public health challenge that is expected to worsen with climate change. Global climate models suggest that by 2050, climate change will result in additional price increases of 5–25 percent for the most important agricultural crops—rice, wheat, maize, and soybeans—and that higher feed prices will result in higher meat prices¹. As food prices increase, the risks of malnutrition and poverty increase. Additionally, seasonality, which is compounded by climate change, can have substantial effects on people's nutritional status. Women and young children are particularly vulnerable to malnutrition as a result of seasonality. Despite the substantial nutritional impacts of seasonality, policymakers and program implementers are at times unaware of these effects owing to inadequate data.



Challenge Statement

We are seeking innovative solutions and working prototypes that leverage big data to understand and address the impacts of climate change on food security and nutrition. The solutions and prototypes may be developed by individuals and organizations from member countries of the World Bank Group, and may leverage data sources such as government-released open data, satellite imagery, mobile network data, anonymized private sector data, social media data and surveys, among others.

The following represent illustrative areas of need:

- Mapping or measuring the risks to farmer's income throughout the food supply chain
- Understanding of the food supply chain, its vulnerabilities and food loss points
- The distribution of value added and income at different stages of the food supply chain
- Understanding, forecasting or raising awareness of constraints on food availability, affordability, and consumption, including local prices and seasonality
- Linking seasonal food production and consumption with nutrition and health, including behavioral aspects, and identification of options for intervention
- Mapping of agricultural production diversity in specific regions, including average crop yields and prices

Innovative data solutions, technologies and methodologies, including the concepts listed below, represent relevant types of solutions:

- Artificial intelligence
- Crowdsourcing applications
- Data science
- Dynamic visualizations
- Machine learning
- Predictive analytics on existing datasets or through combinations of datasets to generate insights, information or new data
- Software applications that allow the capture and management of data
- Hardware applications that generate and capture agriculture, water or weather data

Illustrative examples of submissions that we encourage:

- A crowdsourced map tool to perform crop production inventory, providing a map visualization as output
- Data analytics on crop yield data, seasonality variability and average temperatures
- A data solution that allows the informal maize seed distributors to access market data in exchange for sale information
- A photo sharing app that gathers location information on farms, processing centers and markets
- Early warning systems for drops in farmer income and/or decreasing crop yields
- Predictive analytics of mycotoxins in crops and animals based on historical data, storage locations, health data and weather forecasts

Available resources and datasets

[Agriculture Dataset of Nepal](#)

[CGIAR climate model data](#)

[China Health and Nutrition Survey](#)

[Crop Calendar GIS](#)

[Datahub - Agriculture Datasets](#)

[EarthStat - Agricultural Land Use and Potential Use](#)

[FEWS NET, the Famine Early Warning Systems Network](#)

[Food and Agriculture Organization of the United Nations - Faostat](#)

[Global Agricultural Lands](#)

[Global Biodiversity Information Facility - Agriculture](#)

[Human Influence and Footprint](#)

[International Food Policy Institute \(IFPRI\) - 2015 Global Hunger Index Data](#)

[OECD Agriculture Statistics](#)

[International Water Management Institute - Global Irrigated Area and Rainfed Crops Data](#)

[Social Progress Index 2015](#)

[UK Agriculture Datasets](#)

[US Data.gov - Agriculture Datasets](#)

[US Department of Agriculture Datasets](#)

[US Department of Agriculture - Nutrition Dataset](#)

[World Bank Open Data Catalogue - Agriculture and Rural Development Datasets](#)

[World Bank Agriculture and Rural Development Datasets](#)

[World Bank - Health Nutrition and Population Statistics](#)

[World Bank - Health Nutrition and Population Statistics by Wealth Quintile](#)

[World Food Programme \(WFP\) - Food Aid Information System](#)





Landscapes Challenge: Forests & Watersheds

The Opportunity

Forests are a rich source of Earth's biodiversity, provide critical ecosystem services, and are unfortunately disappearing at an alarming rate due to increased global resource demand as well as climate impacts. Forests and trees stand at the intersection of many decisive challenges: protecting infrastructure; regulating water and climate; providing timber, paper and energy; and housing critical biodiversity². Advances in technology have significantly improved our ability to observe and monitor forests. Data is crucial not only in monitoring, but also in providing actionable information to support the areas of the world most affected by land degradation. Increased awareness of the issues of deforestation and forest degradation have led to increased investment and new international agreements around the issue. This has given way to increased protection and forest management efforts, which have brought net gains in forest area in Europe and Asia and slowed forest loss globally. The ever-increasing pool of data sets and recent improvements in satellite imagery offer new opportunities to combat deforestation and drive sustainable development. Globally, about 2 billion hectares of degraded forest land could be restored to functional, productive ecosystems that help fight climate change.

Interconnected with forests are watersheds, another critical resource that will be affected by climate change. Climate change is expected to make a challenging situation worse. More than one in six people worldwide—663 million people—have no access to safe freshwater. Over 1.4 billion people currently live in river basins where the use of water exceeds minimum recharge levels, leading to the desiccation of rivers and the depletion of groundwater. Climate change is expected to impact stream flows and increase forest degradation, which in turn affect water quality as a response to erosion and nutrient pollution. Drought, arguably the biggest single threat from climate change, is a global threat. By 2025, it is estimated that two out of three people will live in a water-stressed area. As agriculture is the most significant user of water, and water is the most critical input for crops, threats to water supplies pose serious risks to the poor. For many countries, water scarcity is a fundamental challenge to economic and social development. Despite the fact that water basins are such a critical resource, not enough is known about them. From aquifers to river drainage systems, the gap in knowledge of hydrologic systems and their impacts is large and universal. Technological advances are increasing knowledge and management of water usage in the urban and agricultural environments, yet there is significant opportunity to apply data and technology to better understand water basins

² World Bank Group - Forest Action Plan FY16-20



Challenge Statement

We are seeking innovative solutions and working prototypes that leverage data to better understand, forecast, or raise awareness of two critical areas related to climate resilience across landscapes, specifically forests and watersheds. The solutions and prototypes may be developed by individuals and organizations from member countries of the World Bank Group, and may leverage data sources such as government-released open data, satellite imagery, mobile network data, anonymized private sector data, social media data and surveys, among others.

The following represent illustrative areas of need:

- Creating awareness, forecasting, and understanding of potential implications of climate induced changes on forest degradation or water availability at the regional level
- Developing models and services for local weather and precipitation prediction and accumulation for regions where the data and services do not exist
- Leveraging existing data like Landsat time series, forest carbon stocks, and/or remote sensing to characterize and combat forest degradation
- Providing forecasting and awareness of potential seasonal impacts of droughts, floods, and forest fires
- Watershed modeling tools that include temporal functionality and erosion inputs

Innovative data solutions, technologies and methodologies, including the concepts listed below, represent relevant types of solutions:

- Artificial intelligence
- Crowdsourcing applications
- Data science
- Dynamic visualizations
- Machine learning
- Predictive analytics on existing datasets or through matching of datasets to generate insights, information or new data
- Software applications that allow the capture and management of data

Illustrative examples of submissions that we encourage:

- Predictive analytics on forestry data
- A crowdsourced map tool to do forest inventory, providing a map visualization as output
- A data solution that allows private landowners to estimate carbon and biodiversity
- A photo-sharing app that autonomously maps local forests
- Providing new hydrological or hydro-meteorological data
- Watershed conservation screening tool

Available resources and datasets

DIVA - GIS Country Data

European Environment Agency Datasets

Food and Agriculture Organization of the United Nations (FAO) - Geonetwork

FAO - Aquastat Datasets

FAO - Major Watersheds of the World Delineation

Global Digital Elevation Model (GDEM) Data

Global Elevation Data

Global Forest Watch - Open Data Portal

Global Lakes and Wetlands Database

Global Land Cover Facility

Global Land Use Dataset

Global Multi-Resolution Topography Data - Elevation

Global Reservoir and Dam Database

History Database of the Global Environment

HydroSHEDS - Hydrology

International Steering Committee for Global Mapping - Global Map

JRC Water Portal - Hydrology

Koordinates

Joint Research Centre - Institute for Environment and Sustainability (IES) - Catchment Characterisation and Modelling - Hydrology

Landsat on AWS

MapCruzin

NASA Nex

Natural Earth - Vector

Natural Earth - Raster

PALSAR Forest/Non-Forest Map

Spatial Agent

SRTM - Elevation

UNEP Live Data Platform

UNEP GeoData

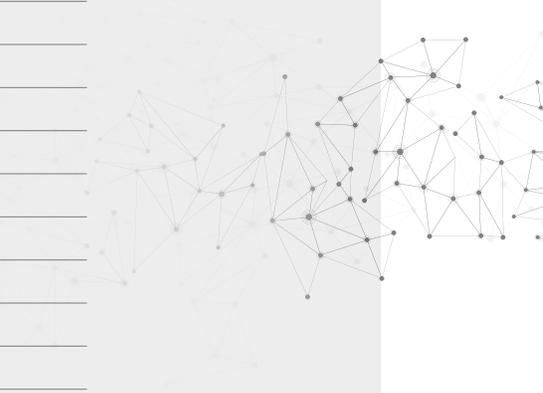
University of Maryland - Global Forest Change 2000 - 2014

USDA - Forest Inventory and Analysis National Program

US EPA - Global Emissions Data

Water Isotopes Data - Hydrology

World Bank - Co2 Emissions (Metric Tons Per Capita)



Big Data Innovation Challenge Objectives

The Big Data Innovation Challenge aims to identify and recognize innovative big data solutions that leverage new sources of data such as government-released open data, satellite imagery, mobile network data, anonymized private sector data, social media data and surveys among others. The big data solutions will need to address specific Climate Change-related issues pertaining to the nexus areas of 1) Food Security, Nutrition and Agriculture, or 2) Landscapes: Forestry and Watersheds. These issues are of high priority towards the World Bank's goals of reducing poverty and improving prosperity globally, the World Bank's 2016 Climate Action Plan and the UN Sustainable Development Goals.

Applications submitted to the Big Data Innovation Challenge should address at least one of the following objectives:

- Address one or more of the issues defined in the Program's Challenge Statements.
- Enable the World Bank Group and its clients to utilize big data innovations to support specific challenges in its operational and research work.
- Improve the ability of the World Bank Group in understanding, forecasting or raising awareness on one of the defined issue areas.

Summary of Innovation Challenge Rules

Applications submitted to the Big Data Innovation Challenge should address at least one of the following objectives:

The Innovation Challenge Submission Period will begin on September 22nd, 2016 and end on November 9th, 2016.

- The Big Data Innovation Challenge is open to individuals and organizations from [member countries of the World Bank](#).
- Each Solution or Prototype must leverage or create some type of data. Combinations of traditional and new or unconventional data sources will be acceptable.
- Submissions may be any kind of data-driven solution, be it for the web, a personal computer, a mobile handheld device, console, SMS, or any software platform broadly available to the public. APIs and algorithms will also be accepted.
- Submissions may incorporate open source or proprietary technology.
- Participation is Free. Contestants must register at www.bigdatainnovationchallenge.org to register for the Innovation Challenge and complete the submission form containing their application.
- Winners will be announced in November, 2016.

Judging Criteria

- Practicality of use, impact and potential for scale (20%)
- Technical feasibility (20%)
- Relevance to challenge focus areas (20%)
- Innovativeness (20%)
- Team (background, capabilities) (20%)

Innovation Challenge Awards

The World Bank Group will evaluate all submitted applications and select **between 5 and 10 Applicants and Submissions as Challenge Winners**. Two of the Challenge Winners will receive \$10,000 in cash each as prize. All winning Submissions will be recognized through public communications from the World Bank Group and may be mentioned as part of a high-profile international development event. The World Bank Group may also decide to invite various participants to present their work at a workshop to facilitate knowledge exchange. The final decision on the winning solutions or prototypes will be entirely of World Bank Group representatives.

Challenge Winners will be selected and awarded for the following categories:

1. Challenge Winner: Best big data solution in the nexus area of Food Security, Nutrition and Agriculture
2. Challenge Winner: Best big data solution in the nexus area of Landscapes: Forestry and Watersheds
3. Honorable Mention Winner: Most innovative big data solution
4. Honorable Mention Winner: Recognition award
5. Honorable Mention Winner: Recognition award

Two cash prizes of \$10,000 each will be awarded to two winning big data solutions or functional prototypes: 1) Best big data solution on Food Security, Nutrition and Agriculture, and 2) Best big data solution on Landscapes: Forestry and Watersheds. These solutions or functional prototypes will need to satisfy the Innovation Challenge judging criteria in order to be awarded the cash prizes. The cash prizes will be allocated with the expectation that the teams will provide the World Bank Group with a license for access, leverage and use of their winning solution or prototype by the World Bank Group. The winning solutions and prototypes will also have the opportunity to be featured on the World Bank Big Data Innovation Challenge Website, World Bank Data Website and World Bank social media. Innovation Challenge participants are encouraged to also use relevant indicators and datasets, and to be creative in exploring approaches for realizing the objectives of addressing the issues defined in the Innovation Challenge.

The World Bank Group will evaluate ways in which winning big data solutions may be able to validate, implement and scale their reach. By enabling innovative big data solutions and prototypes to be identified and recognized, the World Bank Group expects to gain real-world assessment of the applicability of specific big data solutions to various regions, and their technical, organizational and financial viability in addressing the issue areas outlined in the challenge statements.

Review the sections below for more Official Rules and Submission Requirements. By entering the Innovation Challenge, Contestants fully and unconditionally agree to be bound by these Official Rules. All decisions will be final and binding.

Expected Submissions

SOLUTIONS: These are innovative big data solutions (new or existing) that address all or either one of the challenge statements presented in the Innovation Challenge. The submitting solutions should have been tested or validated at a basic level and demonstrate this through the submission form.

PROTOTYPES: These are innovative functional prototypes that are yet to be validated, and that address one of the challenge statements presented in the Innovation Challenge. Prototypes will be expected to justify the value of their concept through written documentation, supporting data, screenshots, videos or other relevant media files.

Submission Terms and Conditions

The terms and conditions will be presented as the final question on the Submission form and Applicants will be required to check a box indicating that he/she agrees to the terms and conditions.

- I am submitting to the Big Data Innovation Challenge only non-confidential and public domain materials.
- I am authorized to submit this application to the Big Data Innovation Challenge and indemnify all Challenge participants, partners, and organizers from any and all claims related to my intellectual property.
- I retain full rights over my intellectual property.
- I grant the Big Data Innovation Challenge participants, partners, and organizers the right to share and distribute my submission materials for review purposes and for the marketing and promotion of the Big Data Innovation Challenge program.
- I understand the eligibility requirements and attest that I meet all requirements listed.
- I understand that in the unlikely event that Challenge organizers alter the Terms and Conditions, all applicants will be informed in writing.

I. Eligibility Requirements

The Big Data Innovation Challenge is open to Applicants (“Applicant”) from member countries of the World Bank (see: www.worldbank.org/countries). Applicants may be individuals, legally established entities (profit or non-profit, academic) and public sector agencies/organizations. Applicants must comply with legal requirements of their country.

A) Individuals must be of age of majority in their country at the time of entry. Individuals may form teams and submit entries on behalf of teams. Individuals who join teams must meet the eligibility requirements for Individual Applicants.

B) Organizations must be legally established entities (profit, non-profit, academic) or public sector agencies/organizations in their respective countries.

Employees, contractors and vendors of the World Bank Group (The World Bank Group consists of the International Bank for Reconstruction and Development, the International Development Association, the Multilateral Investment Guarantee Agency, the International Finance Corporation, the International Center for the Settlement of Investment Disputes.) , the members of the Advisory Council or any company or individual involved with the design, production, execution or distribution of the Challenge and their immediate family members (spouse, parents and step-parents, siblings and stepsiblings, and children and stepchildren, aunt, uncle, niece and nephew) are not eligible to join the Challenge.

II. Innovation Challenge Submission Period

The Innovation Challenge Submission Period will begin on September 22nd, 2016 at 12:00 PM Eastern Daylight Time (“EDT”) and end on November 9th, 2016 at 5:00 PM EDT.

III. How to Enter

A. Registration

Contestants must register at www.bigdatainnovationchallenge.org to submit an entry, and may do so at any time until the close of the submission period. Registration is free. Only Applications submitted through www.bigdatainnovationchallenge.org will be accepted.

B. Online Submission Requirements

Each Contestant will be required to provide the following as part of its entry ("Submission"):

1. A link to the Application.
2. A text description of the Application.
3. At least one visual material which provides a proof of concept such as images (e.g. data visualizations, screenshots) or a video (up to 1 minute long). You may submit URLs to these materials through the application form or embed them in a PDF (images only). Please ensure that the shared materials are easily understood and navigable.
4. Electronic acknowledgement through the website that the entrant(s) have read and agree to be bound by the Official Rules.

Each Contestant may submit the following as part of its entry ("Submission"):

1. A video of the solution or functional prototype of 1 minute of maximum length.

C. Online Submission Requirements

Submissions must meet at least one of the following two objectives:

2. Address one or more of the issues defined in the Program's Challenge Statements.
3. Enable the World Bank Group and its clients to utilize big data innovations to support specific challenges in its operational and research work.
4. Improve the ability of the World Bank Group in understanding, forecasting or raising awareness on one of the defined issue areas.

D. Submission Requirements

1. Each Submission must be at minimum a working prototype that uses big data and works as expressed in the text description of the Submission.
2. Applicants may submit more than one solution or prototype. However, solutions must not be substantially similar to a prior solution in a Submission by the same Applicant.
3. Each Submission must be in English, or if in a language other than English, the Submission must be accompanied by an English translation of the full text.
4. Submissions which, in the World Bank's sole determination do any of the following will be disqualified:
 - adversely affect the reputation of the World Bank Group or any of its officials or member countries;
 - are illegal under applicable laws;
 - depict hatred, defame, abuse, harass, stalk, threaten a specific person or community in the society or can incite violence or conflict, or otherwise violate the legal rights (such as rights of privacy and publicity) of others;
 - contain any infringing, obscene, indecent, or unlawful material or information.

5. Submission must: a) be original; b) be solely owned by Applicant, who represents that no other party has any rights or interest, whether known or unknown; and c) not violate the Intellectual Property or privacy rights of other parties. Intellectual property rights of submitted Applications will be owned by the Applicants. The World Bank disclaims any liability for infringements or other violations of intellectual property rights based on claims of ownership by Applicant; Applicant, by entering the Challenge, agrees to hold harmless and indemnify the Bank against any third party claims.
6. Once a Submission is submitted, the Applicant cannot make any changes or alterations to the Submission until the judging is complete.
7. All winning Submissions may be linked to the World Bank's website. By submitting a solution, you grant the World Bank a non-exclusive, one-year, royalty-free right to use for promotion, public display, informational, educational or awareness purposes your solution. The Bank may at its sole discretion, decide not to expose any solution on its website.

IV. Display of Submissions

Submissions will be posted on www.bigdatainnovationchallenge.org on a rolling basis after being screened for basic functionality, accuracy of messaging, and integrity (i.e., security). All Contestants will have equal access to Submissions posted on the website.

V. Judging Criteria, Screening and Judging Process, Advisory Council, Timeline

A. Applications will be judged on the following three criteria ("Judging Criteria"):

1. Practicality of use, impact and potential for scale (20%)
2. Technically feasible (20%)
3. Relevance to challenge focus areas (20%)
4. Innovativeness (20%)
5. Team (background, capabilities) (20%)

B. Screening and Judging Process

1. Submissions will initially be screened by a World Bank Technical Committee ("Technical Committee"). The Technical Committee will verify that the Contestant meets the Eligibility criteria in Official Rule I and its Submission(s) meet the Submission Requirements in Official Rule III. D.
2. All Submissions that pass the Technical Committee screening will be judged by a World Bank Review Panel ("Review Panel") to select twenty finalist Applications ("Finalist Application") based on the Judging Criteria.
3. Finalist Applications will be judged by an Advisory Council based on the judging criteria to select those Applications to be awarded recognition.

The dates for submission judging are between early October and early November.

DECISIONS OF THE TECHNICAL COMMITTEE, REVIEW PANEL AND ADVISORY COUNCIL ARE FINAL AND NOT SUBJECT TO NEGOTIATIONS OR APPEAL. THE WORLD BANK GROUP IS UNDER NO OBLIGATION TO DISCUSS OR DISCLOSE ITS DELIBERATIONS OR RANKINGS AND RESULTS.

C. World Bank Advisory Council

An Advisory Council will be determined by the World Bank. The World Bank reserves the right to substitute or modify the Advisory Council at any time for any reason.

D. Timeline

● **Ideate September 22nd**

Challenge Opens **September 22nd**, 2016 at 12:00pm EDT. During this ideation phase, applicants will develop and submit their big data solutions to address the challenge issue areas.

● **Review November 9th - December 14th, 2016**

Submissions accepted until November 9th, 2016, 5:00pm, EDT. Submissions will be reviewed by a Review Panel and Advisory Council made up of World Bank Group staff as well as an External Advisory Council. The applicant pool will be narrowed down to the winning solutions in each challenge area and will be announced on December 14th, 2016.

● **Celebrate December, 2016**

Challenge winners will be provided their prizes and showcased on the Challenge website and social media.

● **Knowledge Exchange January and beyond**

Winning solutions may be introduced to partner organizations and World Bank units. The World Bank may also convene interested stakeholders for dialogue or to facilitate knowledge exchange.

VI. Awards

The World Bank Advisory Council will select at least 5 Contestants whose finalist submissions earn the highest overall score to win the following prizes:

- A. Challenge Winner:** Best big data solution on the nexus area of Food Security, Nutrition and Agriculture
- B. Challenge Winner:** Best big data solution on the nexus area of Landscapes: Forestry and Watersheds
- C. Honorable Mention Winner:** Most innovative big data solution
- D. Honorable Mention Winner:** Recognition award
- E. Honorable Mention Winner:** Recognition award

WINNER	PRIZE	QUANTITY
Challenge Winner: Best big data solution in the nexus area of Food Security, Nutrition and Agriculture	<ul style="list-style-type: none"> • US\$10,000 • Public recognition • Possible presentations at a workshop to facilitate knowledge exchange 	1
Challenge Winner: Best big data solution in the nexus area of Landscapes: Forestry and Watersheds	<ul style="list-style-type: none"> • US\$10,000 • Public recognition • Possible presentations at a workshop to facilitate knowledge exchange 	1
Honorable Mention Winner: Most innovative big data solution	<ul style="list-style-type: none"> • Public recognition • Possible presentations at a workshop to facilitate knowledge exchange 	1
Honorable Mention Winner: Recognition award	<ul style="list-style-type: none"> • Public recognition • Possible presentations at a workshop to facilitate knowledge exchange 	2 or more

In the event of a tie, the winner will be selected based on the criteria described in Judging Criteria (1), then (2), and finally (3). If there is still a tie then the winner will be selected based on a vote by the Advisory Council.

VII. Verification of Potential Winners

ALL POTENTIAL AWARD WINNERS ARE SUBJECT TO VERIFICATION BY The World Bank WHOSE DECISIONS ARE FINAL AND BINDING IN ALL MATTERS RELATED TO THE INNOVATION CHALLENGE. Award winners must continue to comply with all terms and conditions of these Official Rules and winning is contingent upon fulfilling all requirements. The potential winners will be notified by email, telephone, or mail on or about October 15th, 2016. The potential winners will be required to sign and return to the World Bank, within Ten (10) days of the date notice is sent, an affidavit of eligibility, and liability/publicity release (except where prohibited) in order to claim their recognition award. If a potential winner of any prize cannot be contacted, fails to sign and return the affidavit of eligibility and liability/publicity release within the required time period (if applicable), or if the prize or prize notification is returned as undeliverable, the potential winner forfeits the award. In the event that a potential winner of an Innovation Challenge award is disqualified for any reason, the Sponsor may award the applicable award to an alternate winner who had the highest score remaining of the Finalist Applications.

By entering this Innovation Challenge, the Contestant agrees that the World Bank may verify the ownership and originality of any Application and that upon request, Contestant shall submit a written copy of any release, license or permission Contestant has received from a third party granting Contestant the right to use such Application. Contestant understands that in the event an Application is selected as a winning Application and Contestant's ownership rights and the originality of Contestant's Application cannot be verified to the satisfaction of the World Bank or is in any other way ineligible, the World Bank shall select an alternate winner based on the same Judging Criteria. The World Bank assumes no liability to third parties for false ownership rights claimed by Contestants.

If after announcing the Best Applications the World Bank Group determines that a Contestant has misrepresented, misstated, or mischaracterized its Submission in any way or Contestant is not the rightful owner of the submitted Application, the Submission may be withdrawn and disqualified from the Innovation Challenge, and any privileges received by winning this contest may be rescinded. Any determinations made by the World Bank in withdrawing and disqualifying any Submission will be final and confidential.

VIII. Innovation Challenge Results

For the Innovation Challenge results go to www.bigdatainnovationchallenge.org on or about November, 2016.

IX. Entry Conditions and Release

By entering, each Contestant agrees to: (a) comply with and be bound by these Official Rules and the decisions of the World Bank and/or the Advisory Councils which are binding and final in all matters relating to this Innovation Challenge; (b) release and hold harmless the World Bank and its affiliates, from and against any and all claims, expenses, and liability, including but not limited to negligence and damages of any kind to persons and property, including but not limited to invasion of privacy (under appropriation, intrusion, public disclosure of private facts, false light in the public eye or other legal theory), defamation, slander, libel, violation of right of publicity, infringement of trademark, copyright or other intellectual property rights, property damage, or death or personal injury arising out of or relating to a Contestant's entry, creation of an entry or submission of an entry, participation in the Innovation Challenge, acceptance or use or misuse of prize (including any travel or activity related thereto) and/or the broadcast, transmission, performance, exploitation or use of entry; and © indemnify, defend and hold harmless the World Bank from and against any and all claims, expenses, and liabilities (including reasonable attorneys fees) arising out of or relating to a Contestant's participation in the Innovation Challenge and/or Contestant's acceptance, use or misuse of the award recognition. Persons or entities who are ineligible to receive World Bank funds under the World Bank's Anti-Corruption Guidelines, Corporate Procurement Policy and Operational Procurement and Consultant Guidelines, and other applicable rules will be ineligible to receive Prizes or Awards.

X. Publicity

Except where prohibited, participation in the Big Data Innovation Challenge constitutes the winner's consent to the World Bank's use of winner's name, likeness, photograph, voice, opinions and/or hometown and state for promotional purposes in any media, worldwide, without payment or consideration.

XI. Limitations of Liability

The World Bank is not responsible for: (1) any false, incorrect or inaccurate information, whether caused by Contestants, printing errors or by any of the equipment or programming associated with or utilized in the Innovation Challenge; (2) technical failures of any kind, including, but not limited to malfunctions, interruptions, or disconnections in phone lines or network hardware or software; (3) unauthorized human intervention in any part of the entry process or the Innovation Challenge; (4) technical or human error which may occur in the administration of the Innovation Challenge or the processing of entries; or (5) any injury or damage to persons or property which may be caused, directly or indirectly, in whole or in part, from Contestant's participation in the Innovation Challenge or receipt or use or misuse of any prize. If for any reason an entrant's Submission is confirmed to have been erroneously deleted, lost, or otherwise destroyed or corrupted, entrant's sole remedy is another provide another Submission. No more than the stated number of prizes will be awarded.

XII. No Recourse to Judicial Procedures

In the event that an entrant should disagree with any of these Innovation Challenge Rules or any decision made by the World Bank Group, Advisory Council, or the Review Panel, the Contestant will have the right to withdraw its Submission. All decisions of the World Bank or the Advisory Council are final. The World Bank and its Advisory Council accepts no responsibility for any damage, loss, injury or disappointment by any entrant to the Challenge or as a result of or not receiving any prize.

XIII. Preservation of Immunities

Nothing herein shall constitute or be considered to be a limitation upon or a waiver of the privileges and immunities of the World Bank, or any other member of the World Bank Group, which are specifically reserved.

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