REQUEST FOR PROPOSALS

Grand Challenges Canada at the Sandra Rotman Centre
MaRS Centre, South Tower, 101 College Street, Suite 406, Toronto, Ontario, Canada M5G 1L7
T 416.673.6568  F 416.978.6826  E savingbrains@grandchallenges.ca

Saving Brains
Scaling Impact
October 2013, Revised November 20, 2013
Executive Summary

An individual’s developmental path is shaped by the interaction of the genes they possess, and the experiences and environment to which they are exposed – especially early in life. Living in poverty increases the exposure to a number of adverse experiences and environments that can pose a risk to healthy development. These risk factors can include poor management of birth complications, lack of consistent and nurturing interactions, exposure to violence or neglect, malnutrition, severe or chronic infections, exposure to environmental toxins, and other sources of toxic stress. Failure to nurture children and protect them from these risks erodes the right of millions of children to develop to their full potential. It is also a devastating waste of human capital that leaves the next generation ill-equipped to solve the enormous challenges that lock individuals, communities and societies in poverty.

With the ultimate goal of increasing human capital, we seek bold ideas for products, services, policies and implementation models that protect and nurture early brain development in a sustainable manner. Proposals must provide innovative solutions relevant to low-resource settings in low- or middle-income countries.

Saving Brains seeks bold ideas with real-world impact that also have the potential to be scaled up. These ideas should represent innovative, affordable and evidence-based products, services or policies. Innovative approaches and sound evaluation are expected to test both how the intervention should be delivered to reach the highest number of children and how the intervention should be optimized to have the most impact on each child reached. Applicants are expected to take an Integrated Innovation® approach, defined as the coordinated application of scientific/technological, social, and business innovation to develop solutions to complex challenges. This approach does not discount the singular benefits of each of these types of innovation alone, but rather highlights the powerful synergies that can be realized by aligning all three.

Projects examining and evaluating these bold ideas are expected to engage end users and build upon local delivery systems. The project team, led by effective, results-driven leaders, should be capable of developing, testing and refining these innovations and their delivery. Ultimately, projects must have measurable outcomes and clear results, which will support learning to accelerate progress against the Saving Brains challenge. Discovery science or capacity-building initiatives alone will not be funded through this Request for Proposals.

We expect to fund proposals from eligible applicants affiliated with organizations in Canada or in eligible low- and middle-income countries. Projects must be implemented in low-resource settings in eligible low- and middle-income countries. There are two funding streams for applicants:

1. **Seed grants**: support the development and validation of innovative ideas to protect and nurture early brain development, offering up to $250,000 CAD over a maximum of two (2) years. By the end of the grant, projects are expected to
demonstrate proof of concept that the innovative idea is likely to have sustainable impact at scale, i.e., provide on-the-ground evidence of the impact it may have on an individual child and how it may be feasibly implemented in the target region. Please note that applicants in Brazil are eligible for seed grants only.

2. **Transition-to-scale grants**: support the refinement, testing and implementation of innovative solutions that have already achieved proof of concept to bring them toward scale, offering up to $1 million CAD in matched funding over a maximum of three (3) years. Projects are expected to demonstrate real-world impact on early brain development with an approach that increases the intervention reach and has strong potential for sustainable impact at scale.

The value of awards is expected to vary depending on project need.

This Request for Proposals is being reissued on November 12, 2013, to mark the partnership between Grand Challenges Canada, the Maria Cecilia Souto Vidigal Foundation and Bernard van Leer Foundation, which extends eligibility for seed grants (up to three may be awarded) to Brazilian innovators proposing integrated approaches to support early childhood development. This new partnership is in association with Grand Challenges Brazil, an initiative of the Brazil Ministry of Health. Together, the partners have committed up to $6.8 million CAD for this initiative.

**Application Deadline: January 16, 2014, at 11:59 p.m. ET**
# Table of Contents

1 INTRODUCTION .................................................................................................................. 1  
   1.1 Grand Challenges Canada .............................................................................................. 1  
   1.2 Problem and Opportunity .............................................................................................. 1  
   1.3 The Saving Brains Program ........................................................................................... 4  

2 APPROACH .................................................................................................................................. 4  
   2.1 Goal of this Request for Proposals .................................................................................. 4  
   2.2 Funding Streams ............................................................................................................. 5  
   2.3 What We Are Looking For ............................................................................................. 6  
   2.4 Saving Brains Community .............................................................................................. 10  
   2.5 Saving Brains Platform ................................................................................................... 10  

3 ACTIVITIES AND DELIVERABLES ............................................................................................. 10  

4 RULES AND GUIDELINES ......................................................................................................... 11  
   4.1 Eligibility Criteria .......................................................................................................... 11  
   4.2 Application Instructions ................................................................................................. 12  
   4.3 Application Timeline ...................................................................................................... 13  
   4.4 Review Process .............................................................................................................. 13  
   4.5 Evaluation Criteria ......................................................................................................... 14  
   4.6 Allowable Costs ............................................................................................................. 17  
   4.7 Privacy Notice ................................................................................................................ 18  
   4.8 Warranty ........................................................................................................................ 18  
   4.9 Intellectual Property ...................................................................................................... 19  
   4.10 Data Access ................................................................................................................... 19  
   4.11 Rights of Grand Challenges Canada .............................................................................. 20  
   4.12 Research Assurances .................................................................................................... 21  

APPENDIX A: COUNTRY ELIGIBILITY ......................................................................................... 22
1 Introduction

1.1 GRAND CHALLENGES CANADA

Grand Challenges Canada is dedicated to supporting **bold ideas with big impact** in global health. We are funded by the Government of Canada; we fund innovators in low- and middle-income countries and Canada. The bold ideas integrate science and technology, social and business innovation (we call this Integrated Innovation®); we work to catalyze scale, sustainability and impact. We have a determined focus on results, and on saving and improving lives.

“Canada has supported development innovation, pioneering new approaches to maximize impact and leverage private sector capital to address global development challenges. Canada’s strategic investments over the past several years are showing promising results...progress by Grand Challenges Canada in tackling critical barriers to solving some of the most pressing global health challenges.”

_Budget 2012, Fostering Sustainable Global Growth_1

Through the 2008 Development Innovation Fund, Canada was the first country to adopt a Grand Challenges approach to solving global health challenges in its official development assistance envelope. Grand Challenges Canada is the primary delivery vehicle for this fund, working alongside its consortium partners, the Canadian Institutes of Health Research and the International Development Research Centre.

Grand Challenges Canada is a significant new undertaking in Canadian foreign aid. Our vision is: **Bold Ideas. Big Impact. A Better World.** Our mission is: **Saving and improving lives in low- and lower-middle-income countries through Integrated Innovation.** Our primary priority is: **Solving critical global health challenges.**

1.2 REGIONAL PARTNERS – BRAZIL

The Maria Cecilia Souto Vidigal Foundation and Bernard van Leer Foundation have joined Grand Challenges Canada as regional partners in its Saving Brains program to support integrated innovations in Brazil. This new partnership is in association with Grand Challenges Brazil, an initiative of the Brazil Ministry of Health.

Maria Cecilia Souto Vidigal Foundation is a Brazilian family foundation dedicated to promoting early childhood development. It generates and disseminates knowledge to professionals dedicated to early childhood and also to managers who have a role in shaping public policies. Maria Cecilia Souto Vidigal Foundation adopts three main strategic lines: (1) Intervention projects: to improve the quality of services provided to pregnant women and children up to age six. (2) Articulation projects: to maximize the

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1 Federal Budget for the Government of Canada released March 29, 2012
impact of initiatives thru partnerships. (3) Knowledge management projects: to leverage society awareness about early childhood development.

The Bernard van Leer Foundation (BVLF) is a private foundation based in the Netherlands. It operates internationally, investing its knowledge and resources to ensure all children can develop to their full potential. For over 64 years BVLF has contributed to child friendly national policies, increased public and private investment in young children, and the provision of direct community services that have benefited millions of families. Presently BVLF focuses on three strategic goals: (1) Taking quality early learning to scale (2) Reducing violence in young children's lives and (3) Improving young children's health by changing the conditions in which they live.

1.3 PROBLEM AND OPPORTUNITY

The Problem
Over 200 million children in developing countries are unable to fulfill their developmental potential. While different areas of the brain develop at different times and continue to adapt throughout life, most of the brain's development takes place within the first 1,000 days of development – during the fetal and early childhood period – making this a fundamentally important time. It is in this critical window that the brain's neural circuits are formed and strengthened with repeated use, or else lost. Significant adversity early in life can produce physiological disruptions to the developing circuits that persist into adulthood. In other words, experiences and environments in the early years substantially shape the developing brain architecture, and the range of abilities and learning capacities a child accumulates. All of these set the trajectory towards long-term health. For example:

- A child with stunted growth by two years of age is at increased risk for cognitive and educational deficits, translating into less time spent in school and less learned per school year. Cognitive and educational deficits accumulated by stunted children are estimated to result in a 22% loss of annual income in adulthood.

- A child who lacks consistent access to a sensitive and responsive caregiver is at increased risk of sustained activation of the brain's stress responses, which can both disrupt neural circuits responsible for learning and memory, and lead to

greater susceptibility to stress-related disorders affecting both mental and physical health⁵.

Unfortunately, those living in poverty or adverse conditions typically have higher exposure to risk factors for impaired cognitive development. These risk factors can include poor management of birth complications, lack of consistent and nurturing interactions, exposure to violence or neglect, malnutrition, severe or chronic infections, exposure to environmental toxins, and other sources of toxic stress.

Failure to nurture children and protect them from these risks erodes the right of millions of children to develop to their full potential. It is also a devastating waste of human capital that leaves the next generation ill-equipped to solve the enormous challenges that lock individuals, communities and societies in poverty. Human capital is defined as the productive wealth embodied in the cognitive abilities, social functioning (e.g., behaviour and psychological functioning), physical capacity and health status that allow an individual to be a contributing member of society.

The Opportunity
The pathways from poverty to the more direct experiences that limit human capital formation are manifold. There is an opportunity to cut through the complexity and enormity of the causes of world poverty and catalyze large gains for the next generation at modest cost by intervening on these pathways, with specific attention to cognitive outcomes (early brain development).

A strong foundation for healthy brain development begins with the future mother’s health – before she even becomes pregnant – and continues to be built as biological systems develop in the first years of her child’s life. Providing safe, nurturing environments (e.g., adequate nutrition, prevention and treatment of infections, safe birthing practices, physical spaces free of toxins, management of sensory impairments, protection from fear) and positive experiences (e.g., consistent and responsive interactions with caring adults) are powerful ways to set children on a trajectory towards a healthy, productive life. A growing body of knowledge about how the brain develops, and what forces can disrupt this process, provides a scientific rationale for applying innovative approaches to protecting and nurturing early brain development⁶. There is also tremendous opportunity for these innovative solutions to be championed by local leadership, leveraging the actions of multiple influencers to ensure that impact at scale can be achieved.

Despite the fact that children across the world grow up in diverse contexts, effective products, services and policies can be developed that mitigate risks to early brain development in multiple settings, even when resources are limited. Furthermore,

innovative implementation models are necessary to ensure effective solutions reach the children and families who could benefit most, and to enable scale and sustainability.

1.4 THE SAVING BRAINS PROGRAM

The ultimate goal of the Saving Brains program is to increase human capital through the development and delivery of solutions that protect and nurture early brain development at scale in a sustainable manner.

To date, the Saving Brains program has committed over $26 million (CAD) in two phases. The focus phase seeks to better define the impact of known interventions and the return on investment in potential interventions with respect to human capital through an initial round of two requests for proposals:

- **Long-term impact (launched May 2011)**
  Eleven projects were funded\(^7\) ($11.8M total) to demonstrate that specific early life interventions can have long-term impact on cognitive human capital formation.

- **Economic impact (launched October 2011)**
  Two consortia were funded\(^7\) ($4.6M total) to estimate the economic impact of poverty-related risk factors for cognitive development and human capital formation. Results from this work will include identification of the most impactful risk factors for human capital formation in specific regions and true costs of known interventions.

The solution phase seeks innovative products, services, policies and implementation models to nurture and protect early brain development through the Scaling Impact requests for proposals launched annually. Fourteen projects were selected for funding in the initial round\(^8\). This request for proposals seeks the next round of Scaling Impact projects.

2 Approach

2.1 GOAL OF THIS REQUEST FOR PROPOSALS

Grand Challenges Canada seeks bold ideas with real-world impact on early brain development that have the potential to be sustainable at scale. These ideas should be innovative, affordable, cost-effective and evidence-based products, services, policies or implementation models.

Innovation is needed to reach the highest number of children and to have the most impact on each child reached. Projects are therefore expected to work towards an effective intervention that is feasibly delivered in a given context. It is anticipated that, to

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\(^7\) Funded projects can be found here: www.grandchallenges.ca/savingbrains-grantees-en/.

do this successfully, it will be necessary to engage end users and build upon local delivery systems. The project team, led by effective, results-driven leaders, should be capable of developing, testing and refining these innovations and their delivery. Ultimately, projects must have measurable outcomes and clear results, which will accelerate progress against the Saving Brains challenge.

2.2 FUNDING STREAMS

Applicants from eligible countries\(^9\) may submit proposals to either of two funding streams: seed grants or transition-to-scale grants. Applicants from Brazil can only submit proposals to the seed grant funding stream. The value of the awards is expected to vary and will be commensurate with the proposed project. The level of funding requested should be sufficient to assure completion of the goals in the stated timeframe. Grand Challenges Canada reserves the right to fully or incrementally fund selected application(s), to partially fund selected applications(s), and to increase or decrease budgets as it deems appropriate at its sole discretion.

**Seed Grants**

Seed grants support the development and validation of innovative ideas to protect and nurture early brain development, offering up to $250,000 CAD each over a maximum of two (2) years. Projects are expected to demonstrate proof of concept by the end of the grant indicating that the innovative idea is likely to have sustainable impact at scale, i.e., provide on-the-ground evidence of the impact it may have on an individual child and how it may be feasibly implemented in the target region. Please note that eligible Brazilian applicants are eligible for seed grants only and are expected to address multiple aspects of children’s development in an integrated manner (i.e., simultaneously tackling health, nutrition, learning and maltreatment).

Success for seed grants is defined as:

- Demonstrated proof of concept of the idea to (i) nurture and protect early brain development in individual children, and (ii) be feasible to implement in the target region
- Demonstrated capacity to monitor progress and evaluate project impact
- Identification and engagement of key stakeholders/influencers
- Identification of barriers to scale, and possible approaches to addressing these barriers
- Identification and engagement of partners that will enable the innovation to go to scale
- Demonstrated capacity to harvest and apply learning, generate and absorb best practices, and contribute to a learning community.

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\(^9\) Eligibility is based on considerations such as the World Bank’s classification of low- and middle-income countries, and the Department of Foreign Affairs, Trade and Development (DFATD) Countries of Focus. A full list of eligible countries is outlined in Appendix A.
**Transition-to-scale Grants**

Transition-to-scale grants support the refinement, testing and implementation of innovative solutions that have already achieved proof of concept to bring them toward scale, offering up to $1 million CAD of matched funding over a maximum of three (3) years. Projects are expected to demonstrate large-scale, real-world impact on early brain development.

A key component of this funding stream is partnerships. The proposed projects need to include partnerships to optimize sustainability and impact. To be eligible for transition-to-scale funding, proposals will require partnerships that contribute (i) expertise relevant to the scale and sustainability of the idea, and (ii) 50% of the funds. Grand Challenges Canada, at its discretion, may choose to match this funding through a grant, a non-grant (e.g. repayable loan or equity stake), or a combination of the two. On a case-by-case basis, Grand Challenges Canada reserves the right to determine the extent to which the 50% matching funds principle is applied. **Matching funds should be ‘new cash’. Matching through in-kind contributions is not preferred.**

Please note that the matching funds are not required to be in place at the time of applying and approval decisions can be made without the funding in place. However, matching funds need to be secured in order for funding to be disbursed. Please also note that funds from the Government of Canada cannot be considered as matching funding.

Success for transition-to-scale grants is defined as:
- Demonstrated large-scale impact on early brain development through delivery of a comprehensive solution that addresses multiple aspects of children’s development in an integrated manner (i.e., simultaneously tackling health, nutrition, learning and maltreatment)
- Demonstrated ability to identify and adapt aspects of the solution that need improvement for greater impact during the lifetime of the grant
- Identification of a clear path to sustained impact at scale.

**2.3 WHAT WE ARE LOOKING FOR**

**Areas of Special Interest**

Projects should address major risks to early brain development that would be relevant to the target population, which might include:
- Child neglect, abuse or maltreatment
- Exposure to contaminants/pollutants
- Exposure to violence, including intimate partner violence
- Inadequate stimulation and/or learning
- Infection
- Intrauterine and neonatal insults
- Malnutrition
- Maternal mental health conditions
- Pregnancy complications
- Sensory impairments
- Toxic stress.

Of particular interest to Grand Challenges Canada are risk factors that have not yet been well represented in the Saving Brains community, such as: child abuse or maltreatment; child neglect; exposure to violence, including intimate partner violence; and intrauterine and neonatal insults. Please note that at the transition-to-scale grant level (and at the seed grant level for Brazilian applicants), it is expected that projects address multiple aspects of children’s development in an integrated manner (i.e., simultaneously tackling health, nutrition, learning and maltreatment).

Project Types
Grand Challenges Canada funds a variety of project types, including but not limited to:
- Products, including diagnostics, drugs, medical devices/equipment, information and communication technologies
- Services, including health education or training programs, health care delivery systems
- Policies
- Implementation models, including financial models, social enterprises.

Of particular interest to Grand Challenges Canada are sustainable social enterprises that support early brain development.

Please note: Discovery science or capacity-building initiatives alone will not be funded through this Request for Proposals.

Focus on Results
Grand Challenges Canada’s ultimate goal is to save and improve lives in low- and middle-income countries. As a result, funded projects are expected to demonstrate real-world impact on health outcomes in the developing world. To this end, projects should have monitoring and evaluation systems in place to clearly quantify effects on early brain development, identify shortcomings and maximize impact.

Communicating results is also an important part of the project’s accountability to Grand Challenges Canada and other key stakeholders. While communicating research findings through scientific publications is important, this should not be the primary objective of funded projects without a well-articulated justification that this is on the critical path to impact.

Inclusion of Core Outcome Metrics
To establish a shared language for the discussion and comparison of results across projects in the Saving Brains portfolio, a set of core outcome metrics has been developed. Use of metrics to capture core outcomes should therefore be incorporated into project plans from the proposal stage for both seed and transition-to-scale grants. All projects should include at least one metric in each of the following domains:
• Physical growth, such as length/height-for-age, weight-for-age, head circumference
• Gross/fine motor skills
• Cognitive function
• Receptive language
• Expressive language
• Socio-emotional capacities

This set of core outcome metrics serves as a minimum set and does not limit the scope of outcomes that can be captured. Measurement of additional outcomes relevant to specific hypotheses is expected. Refinement of these core outcome metrics are expected based on results from the Saving Brains community and beyond.

**Integrated Innovation**
Projects are expected to take an Integrated Innovation approach, defined as the coordinated application of scientific/technological, social and business innovation, to develop solutions to complex challenges. This approach does not discount the singular benefits of each of these types of innovation alone, but rather highlights the powerful synergies that can be realized by aligning all three. Integrated Innovation recognizes that scientific/technological innovation has a greater chance of going to scale and achieving global impact and sustainability if it is developed from the outset with appropriate social and business innovations. Similarly, it recognizes that social or business innovations will not be effective for global health challenges on their own. (Please refer to www.grandchallenges.ca/integrated-innovation.)

Proposed solutions should therefore include a combination of:

• **Scientific/Technological Innovation**: Has a base in the psychological, natural, health or behavioural sciences or in engineering or economics. It can be simple, i.e., there is no requirement for high-tech solutions.

• **Social Innovation**: Recognizes and/or addresses the broader social, structural and/or political determinants of health. It address local and/or cultural contexts that factor into implementation and scaling

• **Business Innovation**: Maximizes the value, relevance and unique quality of the solution to create demand. It addresses affordability and accessibility barriers.

**Scalability**
Grand Challenges Canada is looking for solutions that have the potential to be scaled up, as well as a willingness on the part of the project team to see the innovation realize impact at scale. A clear path to scale will take into account the following factors: the state of local infrastructure; social, political, and economic forces; the capacity of the organization and its leadership; available funding and revenue streams; and other potential barriers to scale. Projects are recommended to leverage local systems where this will lead to efficiencies and to engage end users to increase the likelihood of scale-up.
Effective Leadership and Project Teams
To achieve impact at scale, bold ideas need to be championed by effective, results-driven leaders with the capacity to convene and engage with key influencers. Effective project teams will have expertise, or a plan to engage expertise, in the following areas: early childhood development; monitoring and evaluation; data analysis and statistics; working in the implementation region/country; and psychological assessment (if applicable). Multidisciplinary/cross-sector teams are encouraged, where necessary, to ensure relevant scientific, social, and business expertise.

Understanding of Local Context
To help ensure both impact at scale and sustainability, it is essential that projects have an understanding of the local infrastructure and context (social, political and economic). In doing so, projects can better understand the health status and needs of the community, and identify risks to project success. Where they exist, local systems that support child health, reach the target population or address broader determinants of health should be leveraged and built upon. Determinants of health include: poverty, inequity (including gender inequity), and access to water and sanitation resources.

Stakeholder Engagement
Early brain development is influenced by multiple factors: the family and dwelling; local communities; early childhood health and development programs and services; and regional, national and global environments. As a result, it is anticipated that caregivers, families, communities, businesses, healthcare providers, policy-makers, governments and international agencies can all have a role to play in guiding and supporting the project. Stakeholders, especially end users and those who will ultimately make decisions about the use of the solution, should be engaged at the outset and throughout the life of the project. This helps to ensure that the solution will be poised for initial adoption and subsequent adaptation for greater impact. Additionally, stakeholders can offer insight on their community, and identify the factors necessary for project success.

Gender, Governance and Environment
Gender Equality: Grand Challenges Canada is committed to furthering principles of gender equality in the projects it funds. More specifically, Grand Challenges Canada is supportive of the following objectives: (1) advancing women’s equal participation with men as decision-makers in shaping the sustainable development of their societies; (2) supporting women and girls in the realization of their full human rights; and (3) reducing gender inequalities in access to and control over the resources and benefits of development. Applicants should incorporate the fulfillment of these objectives in the project and consider including considerations for the role and engagement of local stakeholders, including end users for which innovations are meant to improve health outcomes.

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Good Governance: Grand Challenges Canada is committed to furthering principles of good governance in the projects it funds. This includes the promotion of good governance principles of participation, inclusion, equity, transparency, accountability, efficiency and effectiveness in the applicant’s project. Applicants should incorporate good governance throughout the project.

Environment: Grand Challenges Canada requires that applicants commit to ensuring that the project will not have an adverse environmental effect (including, but not limited to, long-term and cumulative effects). Where possible, applicants should endeavour to have positive environmental effects throughout the project.

2.4 SAVING BRAINS COMMUNITY
Saving Brains is a grand challenge that no single team or organization can solve on its own. As a result, Grand Challenges Canada developed and continues to nurture a learning community that is focused on the challenge of Saving Brains. This community includes Saving Brains innovators, the Saving Brains Platform, experts from leading institutions in the field of early child development and funders that meet twice per year. Through sharing results and discussing lessons learned, the community is generating a body of research and practical knowledge on how to develop, refine and evaluate innovative solutions. Together, the community is also creating a suite of interventions for nurturing and protecting early brain development. The Saving Brains community encourages and fosters collective action, as projects working together have greater impact than they would alone.

2.5 SAVING BRAINS PLATFORM
The Saving Brains Platform is made up of mentors and experts in the field of early childhood development, innovation systems and learning communities. As a responsive resource to maximize the impact of Saving Brains projects and to enhance the collective impact of the Saving Brains program, the platform is tasked with the following activities:

- Articulate a common theory of change that elaborates causal pathways based on scientific knowledge and practical experience
- Develop shared metrics and evaluation frameworks
- Foster an ongoing learning community to accelerate innovation through sharing results and lessons learned
- Encourage policy translation through cross-sectional leadership development
- Facilitate private sector engagement.

3 Activities and Deliverables

In addition to engaging in activities related to their proposed project, key members of the funded projects will be expected to actively participate in the community. Grantees will:

- Participate in a community of innovators that will meet twice yearly
- Contribute to and apply learning from the Saving Brains Community, including where moderated by the Saving Brains Platform
- Actively participate in defining a common theory of change to achieve the common goal of protecting and nurturing early brain development
• Incorporate the core outcome metrics into project plans and actively participate in optimizing the set of core outcome metrics
• Actively engage with the Saving Brains Platform to develop capacities to create systems change for impact, including leadership development and evaluation frameworks
• Commit to the Grand Challenges Canada Global Access, Data and Ethics policies (see www.grandchallenges.ca/resources/), including entering into a Global Access Agreement with Grand Challenges Canada, as described below in Section 5.5
• Provide regular progress reports and a final report, and participate in site visits to evaluate progress against project milestones – instructions for the reports will be provided to grant recipients
• Disseminate knowledge through publications in peer-reviewed literature, conferences, social media, etc.

4 Rules and Guidelines

The Canadian Institutes of Health Research oversees the peer review process. Grand Challenges Canada’s Board of Directors makes the final funding decisions.

4.1 ELIGIBILITY CRITERIA

1. Eligible applicants include individual non-profit organizations, for-profit companies, or other recognized institutions that are legally registered or incorporated in an eligible jurisdiction, as listed in Appendix A, that can successfully execute the activities in their respective technical area and are capable of receiving and administering funding. For the purposes of determining eligibility, Grand Challenges Canada may consider both the applicant’s home jurisdiction and any other jurisdiction within which grant project activities will take place. Please note: Grand Challenges Canada must approve any changes in applicant organization from the originally-funded grant.

2. Transition-to-scale proposals require 50% matching through partnerships to be eligible for Grand Challenges Canada funding. Grand Challenges Canada reserves the right to determine the extent to which the 50% matching funds from partnerships are deemed acceptable. Matching funds should be ‘new cash’. Matching through in-kind contributions is not preferred and Grand Challenges Canada will not match other Federal Government of Canada funds. All seed grant applicants are encouraged to secure co-funding.

3. Applicants from the list of countries given in Appendix A are eligible to apply to this Saving Brains Request for Proposals. For the purposes of determining eligibility, Grand Challenges Canada may consider both the applicant’s home jurisdiction and any other jurisdiction within which grant project activities will take place.

4. A project can have a maximum of two Project Leads.
5. Projects must be implemented in countries listed in Appendix A (other than Canada). Projects implemented in Brazil must be led by an eligible applicant based in Brazil.

6. Collaborations between eligible applicants (from countries listed in Appendix A) and Canadian applicants are encouraged but not required. In order to be considered eligible, Canadian applicants must apply with a co-Project Lead primarily affiliated with an institution in an eligible country listed in Appendix A (other than Canada) and a majority of the budget must be spent in an eligible country (other than Canada) in order to be eligible.

7. It is not the intention of this Request for Proposals to exclude existing productive collaborations between applicants in eligible countries and non-eligible countries. If justified, these collaborations may be part of a proposal. However, the applicant in the eligible country must be the primary applicant and Project Lead, and a majority of the budget must be spent in an eligible country listed in Appendix A (other than Canada).

8. Project Leads are permitted to submit only one (1) application to either the seed grant or the transition-to-scale grant competitions. Eligible applicants in Brazil are only eligible for the seed grant competition.

9. Grand Challenges Canada may, at any time and at its sole discretion, modify eligibility criteria with respect to individual applicants, Project Leads or the Saving Brains program, to the extent that such modifications do not materially undermine the review process. (See Section 4.4.)

4.2 APPLICATION INSTRUCTIONS
Application instructions and forms will be made available on the Grand Challenges Canada website via a link from www.grandchallenges.ca/grand-challenges/womens-childrens-health/saving-brains/.

Seed Grants
For a seed grant (up to $250,000 CAD), applicants will submit a proposal that describes their innovative idea, goal, objectives and activities, approach, framework for measuring success, and budget. Project leads from successful seed grant proposals may be invited to attend a Saving Brains Community meeting after notification of award and before finalization of grant agreement. If invited, the costs of attending the meeting will be covered by Grand Challenges Canada.

Transition-to-scale Grants
For a transition-to-scale grant (up to $1 million CAD of matched funds), applicants will submit a Letter of Intent (LOI) that describes their innovative solution, goal, objectives and activities, approach, framework for measuring success, potential partners who will contribute expertise and matching funds, and budget. Successful applicants at the LOI
stage will be invited to submit a full proposal that expands upon these same components; instructions will be provided at the time of invitation.

Project Leads of successful LOIs will also be invited to a proposal development workshop to facilitate the development of high-quality proposals. The workshop will provide Project Leads an opportunity to further develop and hone their proposals by learning grant writing techniques, with guidance from experienced grant writers, mentors and peers. Costs of attending the workshop will be covered by Grand Challenges Canada.

**Proposal Development Resource**
Applicants are encouraged to access Grand Challenge Canada's Online Proposal Development Resource at [www.grandchallenges.ca/proposaldevelopment](http://www.grandchallenges.ca/proposaldevelopment), which is updated regularly and contains material to help researchers and innovators around the world to develop their project proposals and to plan for how their innovation will go to scale, be sustained and have global impact.

### 4.3 APPLICATION TIMELINE

**Seed grants (up to $250,000 CAD):**

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<tr>
<th>Key Deadlines</th>
<th>Event</th>
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<tbody>
<tr>
<td>January 16, 2014</td>
<td>Application deadline for seed grant proposals at 11:59 p.m. ET</td>
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<tr>
<td>April 2014</td>
<td>Notification of award</td>
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<tr>
<td>September 2014</td>
<td>Anticipated start date of projects</td>
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**Transition-to-scale grants (up to $1 million CAD of matched funding):**

<table>
<thead>
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<tr>
<td>April 2014</td>
<td>Invitation to submit a full proposal</td>
</tr>
<tr>
<td>June 11–13, 2014</td>
<td>Proposal development workshop for those invited to submit a full proposal</td>
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<tr>
<td>July 16, 2014</td>
<td>Application deadline for invited full proposals at 11:59 p.m. ET</td>
</tr>
<tr>
<td>October 2014</td>
<td>Notification of award</td>
</tr>
<tr>
<td>January 2015</td>
<td>Anticipated start date of projects</td>
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</table>

### 4.4 REVIEW PROCESS

Due to the importance of the eligibility criteria, Grand Challenges Canada will conduct an initial triage based on eligibility criteria, as outlined in Section 4.1. This triage and subsequent parts of the review process will also take the applicant's performance on other projects funded by Grand Challenges Canada into account.
The Canadian Institutes of Health Research is responsible for conducting the peer review of all seed grant applications and transition-to-scale Letters of Intent. A review committee of external scientific, social and business reviewers, including experts from low- and middle-income countries, will advise on the merit of proposals, based on the evaluation criteria. (See Section 4.5.)

At the full proposal stage, transition-to-scale applications will be assessed by an Investment Committee using the following process, which was developed in partnership with the Canadian Institutes of Health Research.

Full proposals will be evaluated on technical and scientific merit through a scientific peer review conducted by the Canadian Institutes of Health Research. The results of this review will be made available to the Investment Committee prior to its meeting. If a project scores below 3.5 using the standard Canadian Institutes of Health Research rating scale, this project will not be reviewed by the Investment Committee.

In parallel, Grand Challenges Canada will draft an investment memo incorporating due diligence collected through interviews with applicants and partners, which will be made available to the Investment Committee prior to their meeting.

The Investment Committee will evaluate proposals together with scientific excellence review and investment memo to make funding recommendations to Grand Challenges Canada’s Board of Directors. Grand Challenges Canada will then conduct additional due diligence and negotiate a deal. Refinements to the proposed project plan, structure, amount and type of funding and oversight may be required based on this due diligence.

4.5 EVALUATION CRITERIA

Seed grants and transition-to-scale grants have different evaluation criteria, as outlined separately below.

Seed Grants

1. Impact

- Is the proposed idea aligned with the goal of this call (Section 2.1) and what we are looking for (Section 2.3)?
- Does the idea have the potential to be transformational?
- Will the project have clear outcomes that demonstrate proof of concept of the idea to protect and nurture early brain development in low-resource settings?
- Is the proposed idea appropriate for wider implementation and scaling in low-resource settings?

2. Integrated Innovation

- Is the proposed idea bold, truly novel and/or a departure from incremental improvements over current approaches? Innovative approaches to the implementation and delivery of known interventions are also encouraged.
- For Brazilian proposals: Does the plan address multiple aspects of children’s development in an integrated manner (i.e., simultaneously tackle health, nutrition, learning and maltreatment)?
• Is there a plan or approach to identify the barriers to scale and sustainability?
• Does the proposed idea integrate scientific/technological, social and business innovation?
• Will key stakeholders and/or potential users of the knowledge/goods/services be engaged in the proposed project?

3. Technical Merit/Execution Plan
• Is the plan to execute the project clearly articulated, feasible and technically sound? Has the project scope been clearly defined?
• Are the proposed goals and objectives based on sound scientific analysis, technical rigour and/or existing evidence?
• Are there appropriate, feasible and technically sound metrics of success/milestones to measure and evaluate progress toward achieving proof of concept?
• Is there a feasible plan to identify and apply learning for improved outcomes as the project unfolds?
• Are the timelines proposed appropriate and feasible?
• Is there evidence provided to indicate the likelihood of success, and a rigorous assessment of risks and associated mitigation strategies?
• Is there sufficient time dedicated for proper execution of the plan?

4. Leadership Capability to Champion Change
• Does the Project Lead have the commitment and leadership potential needed to bring solutions to scale, as demonstrated by letters of support for the Project Lead and other evidence?
• Are the proposed Project Lead and key team members appropriately trained, experienced and positioned in the local community to carry out the proposed work (i.e., scientific, social and business expertise)?
• Do the proposed partnerships and composition of multi-disciplinary teams increase the likelihood of success?
• Have the Project Lead and key team members demonstrated the ability to convene necessary stakeholders who can influence systems change (e.g., business, academic and public sectors), including those new to the project and its goals, as demonstrated by letters of support for the project?

5. Value for Effort
• Are the scope of the proposed work and the funds requested reasonable and commensurate with the proposed study goals?
• Does the proposal represent a particularly thoughtful and efficient use of resources?

Transition-to-Scale Grants
1. Impact
• Is the proposed solution aligned with the goal of this call (Section 2.1) and what we are looking for (Section 2.3)?
• Does the solution have the potential to be transformational?
Has the proposed solution already achieved proof of concept and is it ready for refinement, testing and implementation toward scale?

Is it clear that the outcomes of this project will promote healthy early brain development in low-resource settings?

Is the proposed solution appropriate for wider implementation and scaling in low-resource settings?

2. Integrated Innovation

Is the proposed solution bold, truly novel and/or a departure from incremental improvements over current approaches? Innovative approaches to the implementation and delivery of known interventions are also encouraged.

Does the plan address multiple aspects of children’s development in an integrated manner (i.e., simultaneously tackle health, nutrition, learning and maltreatment)?

Is there an Integrated Innovation approach to overcome the barriers to scale and sustainability?

Is the anticipated plan for taking this solution to scale and achieving sustainability feasible?

Will key stakeholders and potential users of the knowledge/goods/services be engaged in the proposed project?

3. Partnerships

Does the applicant have sufficient alliances or partnerships to scale the innovation (e.g., relevant stakeholders, joint ventures, selling/distribution agreements, channel partnerships, licensing arrangements, etc.?)

Is the matching partnership strategic in its ability to enable the innovation’s transition to scale?

Will the partnership help the applicant take an Integrated Innovation approach?

4. Technical Merit/Execution Plan

Is the plan to execute the project clearly articulated, feasible and technically sound? Has the project scope been clearly defined?

Are the proposed goals and objectives based on sound scientific analysis, technical rigour and/or existing evidence?

Are there appropriate, feasible and technically sound metrics of success/milestones to evaluate and measure progress on protecting and nurturing early brain development?

Is there a feasible plan to identify and apply learning for improved outcomes as the project unfolds?

Are the timelines proposed appropriate and feasible?

Is there evidence provided to indicate the likelihood of success, and a rigorous assessment of risks and associated mitigation strategies?

Is there sufficient time dedicated for proper execution of the plan?
5. **Leadership Capability to Champion Change**
   - Has the Project Lead demonstrated the commitment and leadership needed to bring solutions to scale, as demonstrated by letters of support for the Project Lead and other evidence (i.e., a track record of successfully scaling innovations and making them sustainable)?
   - Are the proposed Project Lead and key team members appropriately trained, experienced and positioned in the local community to carry out the proposed work (i.e., scientific, social and business expertise)?
   - Do the proposed partnerships and composition of multi-disciplinary teams increase the likelihood of success?
   - Have the Project Lead and key team members demonstrated the ability to convene necessary stakeholders who can influence systems change (e.g., business, academic and public sectors), including those new to the project and its goals, as demonstrated by letters of support for the project?
   - Do influencers/key stakeholders required for systems change and/or to sustain innovation at scale have an active role in the project?
   - Is there commitment of a strategic partner institution capable of supporting the scaling of the solution?

6. **Value for Effort**
   - Are the scope of the proposed work and the funds requested reasonable and commensurate with the proposed study goals?
   - Does the proposal represent a particularly thoughtful and efficient use of resources?
   - How much cash (preferred) or in-kind resources have been leveraged to provide confidence that the solution will be sustainable on its own after Grand Challenges Canada grant funding?
   - Is this a proposal where Grand Challenge Canada's funding provides additional value above what could be funded by existing traditional funding sources, or is seen as a catalyst for scale?

4.6 **ALLOWABLE COSTS**
Grant funds may be used for the following cost categories:

1. **Personnel:** *Please note that salary support is an allowable cost.*

2. **Travel:** *Please note that, for transition-to-scale applications, $20,000 per year must be included within the budget to cover the costs of two project team members attending two community meetings per year.*

3. **Consultants**

4. **Direct Supplies**

5. **Equipment:** *Please note that partial or full support for equipment may be requested. Funding for infrastructure will be limited.*
6. Other Research Costs

7. Sub-grants/Subcontracts

8. Indirect costs: *Please note that Grand Challenges Canada will provide a limited amount of indirect costs based on the nature of the applicant organization, to a maximum of 12% of direct costs of the grantee’s administered grant value (1–7 outlined above). For transition-to-scale grants, this amount must also be matched and is considered part of the total project amount.*

Please provide budget estimates according to the categories outlined above and the detailed instructions included in the application.

**4.7 PRIVACY NOTICE**

To help us in the evaluation and analysis of projects, all proposals, documents, communications and associated materials submitted to the Grand Challenges Canada (collectively, “Submission Materials”) will become the property of Grand Challenges Canada and will be shared with other members of the Grand Challenges Canada consortium (the International Development Research Centre and Canadian Institutes of Health Research) and may be publicly disclosed. We will report publicly on the number of applications received and the countries from which they originated. The proposals will be subject to confidential external review by independent subject matter experts and potential co-funders, in addition to analysis by our staff. Please carefully consider the information included in the Submission Materials based on the above. If you have any doubts about the wisdom of disclosure of confidential or proprietary information (including information related to inventions), we recommend you consult with your legal counsel and take any steps you deem necessary to protect your intellectual property. You may wish to consider whether such information is critical for evaluating the submission, and whether more general, non-confidential information may be adequate as an alternative for these purposes.

We respect confidential information we receive. Nonetheless, notwithstanding your characterization of any information as being confidential, we may publicly disclose all information contained in Submission Materials to the extent as may be required by law, and as is necessary for potential co-funders and external reviewers, such as government entities, to evaluate them, and the manner and scope of potential funding, consistent with appropriate regulations and their internal guidelines and policies.

**4.8 WARRANTY**

By providing any Submission Materials, the sender warrants Grand Challenges Canada that they have the right to provide the information submitted. Applicants with questions concerning the contents of their Submission Materials may contact Grand Challenges Canada by email at savingbrains@grandchallenges.ca.
4.9 INTELLECTUAL PROPERTY
Since the output of this program may lead to innovative technologies and/or products for those that need them most in the developing world, the successful development of these products may require involvement and support of the private sector, and may also involve collaborations with multiple organizations, including academic and/or non-profit research institutions. It is the intent of this program to support the formation of appropriate public-private partnerships that are essential to meet these urgent global health needs. Intellectual property rights and the management of intellectual property rights are likely to play an important role in achieving the goals of this program. Grand Challenges Canada’s Global Access Strategy will guide our approach to intellectual property and we urge all applicants, even at the application stage, to consider their willingness to submit a full proposal in compliance with the Grand Challenges Canada Global Access Strategy, the guiding principles of which are as follows:

- Breakthrough solutions to global challenges are made accessible to those in need, particularly in the developing world. Accessibility relates to both price and availability.

- Knowledge gained through discovery is broadly, and as promptly as possible, distributed between related projects and to the global scientific community.

- Commercialization of resulting outputs is encouraged, as long as the first two principles are achieved.

Grantees will be required to sign a Global Access Agreement with Grand Challenges Canada, in line with the Guiding Principles, for the use of intellectual property and other outputs arising from this program, including a non-exclusive, perpetual, irrevocable, royalty-free, fully-paid, sub- licensable and assignable license in respect of all outputs arising from the work carried out by grantee, or at the grantee’s direction, in connection with this Grand Challenges Canada grant, to permit Grand Challenges Canada (and its sub- licensees) to use, educate, conduct research, develop, make, have made, import, export, sell, offer for sale or distribute products, processes or solutions in developing markets for the purposes of global access. For further information, please refer to Grand Challenges Canada’s intellectual property policy at www.grandchallenges.ca/resources/.

4.10 DATA ACCESS
Grand Challenges Canada is committed to optimizing the use of data to translate knowledge into life-saving solutions. To fulfill this objective, data must be made widely and rapidly available to the Grand Challenges Canada research community and the broader global health community through ethical and efficient data access practices. In accordance with global access, data access represents an elaboration of the second guiding principle of the Global Access Policy, which states that knowledge gained through discovery is broadly, and as promptly as possible, distributed between related projects and to the global scientific community.

Grantees may be required to develop and submit a Data Access Plan (DAP) that specifies how data access will be implemented and the timeframe for data release.
Data refers at a minimum to final, annotated quantitative and qualitative datasets and accompanying information, such as metadata, codebooks, data dictionaries, questionnaires and protocols.

Grand Challenges Canada recognizes the value of intellectual property and commercialization, and the benefits of first and continuing use of data, but not prolonged or exclusive use. In some cases, intellectual property protection, laws or regulations may delay or preclude access to data. In such cases, the grantee will provide justification to warrant a partial or complete waiver of the data access requirement.

4.11 RIGHTS OF GRAND CHALLENGES CANADA

This Request for Proposals is part of a discretionary granting program. Submission of an application does not create a contractual relationship between the applicant and Grand Challenges Canada. Furthermore, all applicants acknowledge that this program is being tested through this Request for Proposals and that all terms are subject to change. In particular, Grand Challenges Canada reserves the right, in its sole discretion and without notice, to:

1. Cancel this Request for Proposals at any time and for any reason.
2. Amend and reissue the Request for Proposals at any time and for any reason. This Request for Proposals is valid commencing on November 12, 2013, and supersedes any previous Request for Proposals of this nature. The terms and conditions of this Request for Proposals apply to all applications submitted from November 12, 2013, going forward and may be replaced by a revised Request for Proposals in the future. We recommend checking for any revisions to the Request for Proposals prior to the submission of your Letter of Intent and proposal.
3. Accept or reject any application that is nonconforming because it does not meet the eligibility criteria, does not comply with the application instructions, and/or does not comply with the instructions for allowable costs.
4. At Grand Challenges Canada’s sole discretion, not award an application based on performance on a previous Grand Challenges grant or project, or based on the award of a grant to the applicant for the same or similar research by one of Grand Challenges Canada’s partners or collaborating institutions.
5. Disqualify any application at any stage where there is an indication that the proposal was, in any way, plagiarized.
6. At Grand Challenges Canada’s sole discretion, accept or reject any or all applications, regardless of an application’s ranking based on the evaluation criteria, with or without providing an explanation.
7. Award a fewer number of awards than expected.
8. Award applications with different funding amounts, different durations, and/or different conditions than set out above.
9. Verify any information provided by applicants through independent research or by contacting third parties deemed to be reliable by Grand Challenges Canada and use that information to inform Grand Challenges Canada’s funding decision.
10. Modify eligibility and evaluation criteria, including but not limited to criteria assessed at the triage stage, at any time.
11. Use video or other visual representation submitted by applicants on the Grand Challenges Canada website or other media and/or social media channels for public engagement.

12. Not provide critiques or feedback regarding the reasons a proposal was or was not selected.

13. Design grant awards to link to possible funding partners, including private sector investors.

14. Provide grant awards in collaboration with funding partners. This may involve separate grant agreements with each organization (i.e. one with Grand Challenges Canada and one with our partner organization), as well as distinct transfers of funds. The project deliverables, however, will be aligned.

4.12 RESEARCH ASSURANCES

It is the policy of Grand Challenges Canada that research involving human subjects, research with animals and research subject to additional regulatory requirements must be conducted in accordance with the highest internationally recognized ethical standards. In order to receive funds from Grand Challenges Canada, initially and throughout the course of a research project, researchers must affirm and document compliance with the guiding ethical principles and standards outlined below:

1. Research involving human participants must be conducted in a manner that demonstrates, protects and preserves respect for persons, concern for the welfare of individuals, families and communities, and justice.11

2. Research involving animals must be conducted in a manner that ensures their humane care and treatment.

3. Certain research endeavors, including but not limited to research with recombinant DNA, biohazards and genetically modified organisms, may be subject to enhanced regulation and oversight.

While not necessary for the Letter of Intent, and as applicable to the individual project, Grand Challenges Canada will require that for each venue in which any part of the project is conducted (either by your organization or a sub-grantee or subcontractor), all legal and regulatory approvals for the activities being conducted will be obtained in advance of commencing the regulated activity. We will further require you to agree that no funds will be expended to enroll human subjects until the necessary regulatory and ethical bodies’ approvals are obtained. For further details, please see the Grand Challenges Canada Ethics policy at www.grandchallenges.ca/resources.

Questions about the Saving Brains program or the application process should be addressed to savingbrains@grandchallenges.ca. Responses to frequently asked questions will be periodically posted on our website at www.grandchallenges.ca/grand-challenges/womens-childrens-health/saving-brains.

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APPENDIX A: COUNTRY ELIGIBILITY

Applicants from the following list of countries are eligible to apply to this call for proposals. This list of countries is based on considerations such as the World Bank’s classification of low- and middle-income countries, the Department of Foreign Affairs, Trade and Development (DFATD) Countries of Focus, and also includes Canada.

This list is subject to revision by Grand Challenges Canada without notice. Notwithstanding inclusion below, all eligible jurisdictions remain subject to approval by Grand Challenges Canada on the basis of compliance with all relevant Canadian and international laws and policies. Whenever possible, Grand Challenges Canada will provide reasonable notice of a determination of ineligibility for applicants located within jurisdictions listed below.

Afghanistan  
Antigua and Barbuda  
Armenia  
Bangladesh  
Belize  
Benin  
Bhutan  
Bolivia  
Brazil  
Burkina Faso  
Burundi  
Cambodia  
Cameroon  
Canada  
Cape Verde  
Chad  
Colombia  
Comoros  
Congo, Rep.  
Côte d’Ivoire  
Djibouti  
Dominica  
Egypt, Arab Rep.  
El Salvador  
Ethiopia  
Gambia, The  
Georgia  
Ghana  
Grenada  
Guatemala  
Guinea  
Guinea-Bissau  
Guyana  
Haiti  
Honduras  
India  
Indonesia  
Jamaica  
Kenya  
Kiribati  
Kosovo  
Kyrgyz Rep.  
Lao PDR  
Lesotho  
Liberia  
Madagascar  
Malawi  
Malaysia  
Mali  
Mauritania  
Micronesia, Fed. Sts  
Moldova  
Mongolia  
Montserrat  
Morocco  
Mozambique  
Myanmar  
Nepal  
Nicaragua  
Niger  
Nigeria  
Pakistan  
Papua New Guinea  
Paraguay  
Peru  
Philippines  
Rwanda  
Samoa  
São Tomé and Príncipe  
Senegal  
Sierra Leone  
Solomon Islands  
Somalia  
South Sudan  
Sri Lanka  
St. Lucia  
St. Vincent and the Grenadines  
Sudan  
Suriname  
Swaziland  
Tajikistan  
Tanzania  
Thailand  
Timor-Leste  
Togo  
Uganda  
Ukraine  
Uzbekistan  
Vanuatu  
Vietnam  
West Bank  
Yemen, Rep.  
Zambia  
Zimbabwe

\(^1\) Applicants from countries other than those listed here may only be considered for funding upon invitation by Grand Challenges Canada.  
\(^2\) Applicants from Brazil are only eligible for seed grants. Projects with activities based in Brazil must be led by an eligible Brazilian applicant.