

Environment and Conservation Fund Environmental Research, Technology Demonstration and Conference Projects

Briefing on
2021 Invitation for Applications
7 July 2021



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Welcoming Remarks

by Professor Jimmy C.H. FUNG
Chairman, Research Projects Vetting
Subcommittee



Environment and Conservation Fund



- Established in 1994
- To promote individual behavioural and life style changes to protect the environment and achieve sustainable development
- To develop or introduce innovative technologies and practices to improve our environment and conserve resources



Environment and Conservation Fund



Environmental
Education and
Community Action
Projects

Community Waste
Reduction Projects

Waste Separation Projects to pave the
path for Municipal Solid Waste Charging

**Environmental Research,
Technology
Demonstration and
Conference (RTDC)
Projects**

- Local non-profit making organisations are eligible to apply

RTDC Projects

Research and Technology Demonstration Projects



- Contribute in a **direct and practical way** towards environmental improvement and conservation of the local environment
- Promote and encourage adoption of technologies by different sectors in Hong Kong

International Conference Projects

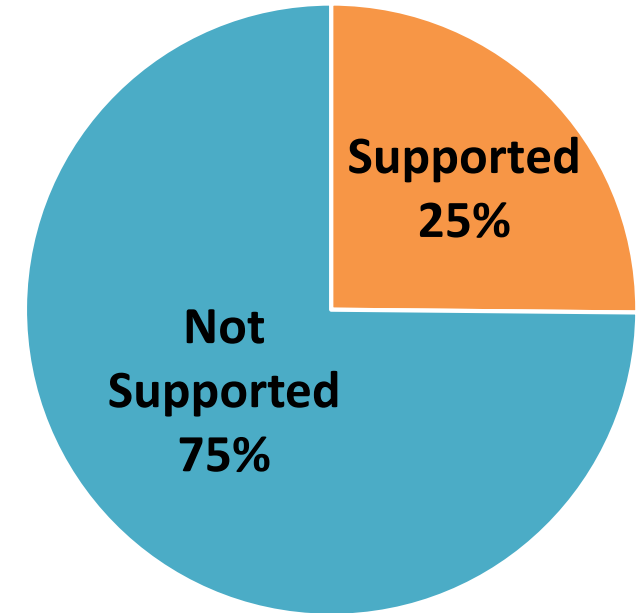
- Facilitate the exchange of best practices, expertise and experience on environmental and conservation issues
- Raise Hong Kong's profile as a leading green city



RTDC Projects Applications

Results of 2020 invitation exercise :

Total no. of applications received	171
No. of projects supported	43
No. of projects not supported	128
Approved amount	\$29.97 M





RTDC Projects Funding Scheme

Application Period

- From 21 June to 20 August 2021 (deadline at 6pm)

Budget

- \$35 million in total, including \$5 million for a special theme “Clean Air and Green Transport” and \$3 million for Conference projects

Notification of Results

- Conference projects: around October 2021
- Research and technology demonstration projects: Q1 2022





2021-2022 Priority Research Themes / Topics



Priority Research Themes and Topics

- Please refer to Appendix 1 of the Guide to Application for details

Special Theme
**Clean Air and
Green
Transport**

**Climate
Change –
Mitigation,
Adaptation
and Resilience**

**Waste
Management,
Reduction
and
Recycling**

**Water
Quality and
Water
Pollution**

**Biodiversity
and
Conservation**

Air Quality

**Construction
Noise –
Prevention
and
Mitigation**

Special Theme: Clean Air and Green Transport

- Air purification technology
- Portable rechargeable battery operated electricity supply system for small scale construction works
- Technology to reduce emissions of nitrogen oxides from existing local vessels
- Technology to reduce emissions of fine suspended particulates from existing non-road mobile machinery operating at construction sites
- Studies/surveys/education programmes on use of electric vehicles (EV) (e.g., engagement of stakeholders on training of mechanics for maintenance of EVs, fee charging arrangement for different types of EVs)
- Research and trial on local applications for second-life EV batteries

Climate Change - Mitigation, Adaptation and Resilience

- Technology to reduce the cost of renewable energy (RE)
- Research which can overcome the hurdle of the capacity issue of the power companies' grid in connecting RE systems
- Research on new zero-carbon energy fuel for electricity generation
- Research on technologies to achieve net zero carbon buildings
- Methodologies and technologies to evaluate and disclose embodied carbon emissions of consumer goods (e.g. carbon labelling)
- Technologies to optimise/reduce air-conditioning loading in buildings; energy efficiency technologies and standards suitable for new buildings
- Technologies for the business sector to develop and supply low-carbon goods and services to the public
- Strategy and methodology to enhance coordination and connection on greening and vegetation projects
- Develop and establish an information database for (i) carbon reduction potentials inventory of different biotic species; and (ii) restoration and protection of local natural 'carbon sinks', e.g. country and marine parks, and wetlands

Biodiversity and Conservation

- Baseline studies on understudied taxa groups of potential conservation concern; conservation on threatened / ecologically important / keystone species; Ecological connectivity
- Urban biodiversity
- **Wildlife management**
- Invasive alien species
- Impact of climate change / human recreational activities and mercury release
- Tools to identify difficult taxa groups / aid enforcement on wildlife crime
- Sustainable consumption of biological resources

Waste Management, Reduction and Recycling

- Treatment and beneficial use of incineration bottom ash and/or fly ash to achieve zero landfilling
- Food waste and yard waste management; Animal waste treatment technologies
- Efficient collection of food waste from small eateries and households
- Innovative technology for waste composition survey and sorting of recyclables from Municipal solid waste (MSW) or construction wastes
- Circular Economy and **Reverse Logistics**, application of big data and AI
- Advanced application for reverse vending machines and 5G technology for bulk collection of the plastic beverage containers
- Effective collection, sorting and recycling/treatment/disposal systems for beverage cartons
- Recycling technologies for disposable Personal Protective Equipment used in healthcare sector
- Technologies e.g. Augmented Reality and AI to assist source separation and on-site sorting of common recyclables and construction waste
- To study the viability of using designated garbage bags (under the MSW charging scheme) with recycled plastic content in food-contact application

Air Quality

- Air quality monitoring and emission measurements using sensor technology
- Volatile organic compounds (VOCs) monitoring technology

Water Quality and Water Pollution

- Odour mitigation from sewerage facilities and sewage-polluted storm drains
- Innovative techniques for use in sewer condition survey and rehabilitation
- Smart technologies for 3D visualisation and asset management of underground sewerage and storm-drain networks
- Assessment of ecological and health risks of microplastics present in the aquatic environment
- Innovative technologies for preventing microplastics from entering the water environment
- Smart technologies in monitoring, capturing and mapping of floating refuse in watercourses and storm drains
- On-line real-time water quality monitoring system at inland, near-shore and open waters
- Satellite imagery and remote sensing applications for wide-area marine water monitoring and environmental incident remediation
- Innovative technology of leachate treatment

Construction and Traffic Noise – Prevention and Mitigation

- Mobile construction noise barriers
- Quieter equipment / methods for construction and demolition works
- Domestic renovation noise reduction
- Traffic noise mitigation in residential developments
- Acoustic materials and active noise cancellation devices
- Light weight materials for retrofitting noise barriers / enclosures on existing road structures
- Low noise road surfacing
- Technology for real-time detection of modified and noisy vehicles



Application – Basic Information



Application – Basic Information

- **Project duration:** normally not more than 36 months
- **No. of application:** each Principal Investigator (**PI**) can submit **one** application for conference project and **one** application for research or technology demonstration (RTD) project
- **No. of approved projects:** each PI can concurrently hold **one** conference and **two** RTD projects



Application – Basic Information (Cont'd.)

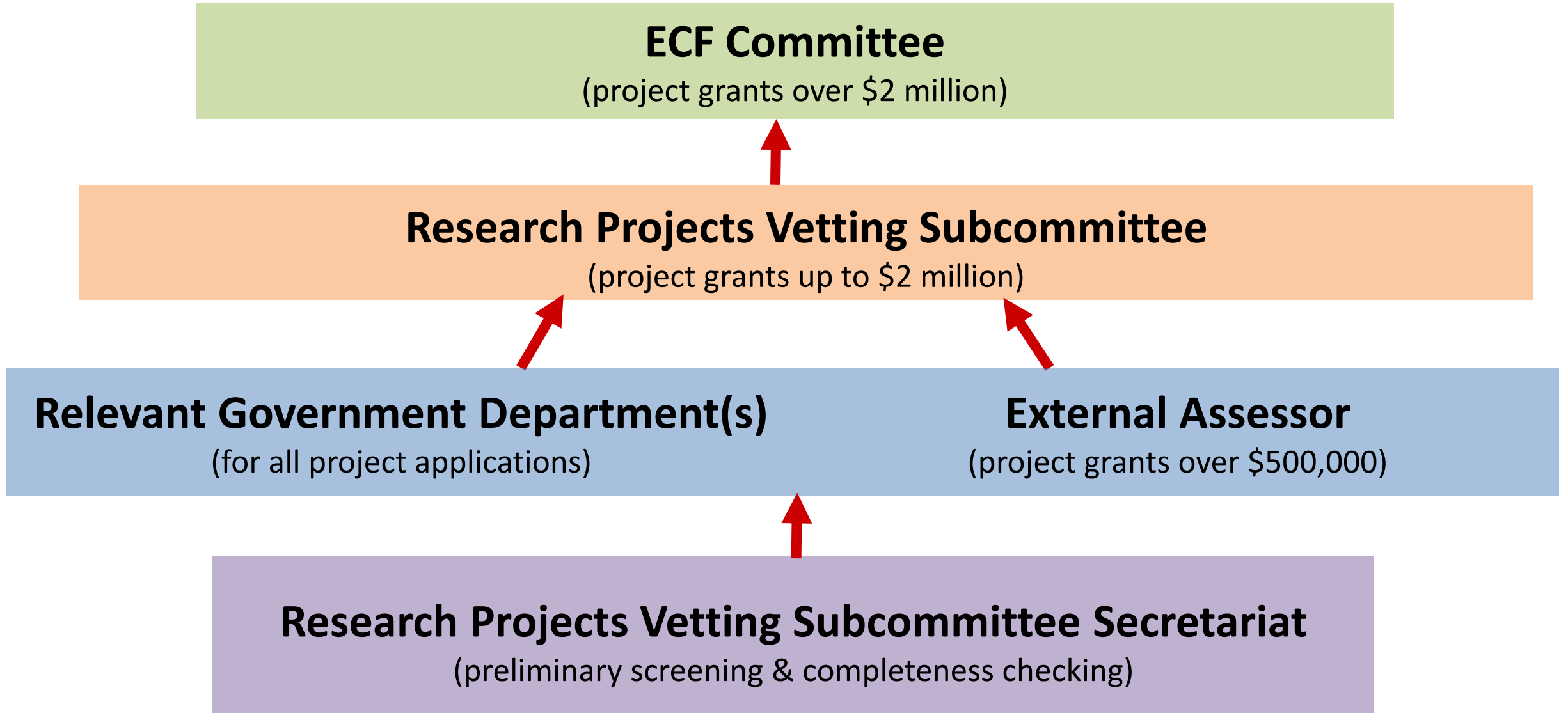
- **Applications** from Universities/THEi must be submitted **through respective Research Offices (ROs)**
- ROs must confirm **eligibility of the PIs**
- If the current appointment of the PI cannot cover the whole project period, the project must include at least one eligible Co-Investigator from the same University



Vetting Procedures



Vetting Procedures



Vetting Criteria

Competition-based mechanism

Assessment Criteria	Weighting
(a) Merits and contributions to environmental protection and conservation, including the deliverables and outcomes expected to be derived from the project	60%
(b) Project feasibility and track record of applicant	40%

Reasons for NOT Supporting Past Applications



Not suitable for ECF



Too theoretical



Low application / practical values



No imminent need



Low project feasibility



Similar research already
conducted



Application Submission



Application Methods

1

Electronic application form at the GovHK website:

<https://eform.one.gov.hk/form/epd006/en/>

- Submission deadline:

6 p.m. on 20 August 2021 (Friday)

Application Form for Environmental Research, Technology Demonstration and Conference Projects

1) Introduction

2) Part 1

3) Part 2

4) Part 3

5) Supplementary/
Supporting Documents

6) Checklist of Required
Documents

7) Review & Confirm

8) Acknowledgement



ENVIRONMENT AND CONSERVATION FUND

The Government of the Hong Kong Special Administrative Region of the People's Republic of China

Application Guideline

This Application Form may be amended by the Environment and Conservation Fund (ECF) Committee, Research Projects Vetting Sub-committee (the Vetting Sub-committee) and the Vetting Sub-committee Secretariat (Secretariat) as and when necessary.

Please read the "Guide to Application – Environmental Research, Technology Demonstration and Conference Projects" [before](#) completing this form. You may complete this Application Form in Chinese or English.

The completed Application Form must be submitted before 6:00 pm on the date of the application deadline. Late or incomplete applications will not be processed.

Applications from universities should be made through the Research Offices of the universities.

Please download the form for "Supplementary Information Annex 01 to Annex 12 (RTP Application Annex) on the [ECF website](#). All sections of the Application Form should be completed with supporting document(s) wherever required. Supplementary Information Forms 01 to 12 should be uploaded together with the application form in one go at the same time when the application form is submitted even if one or some of the form(s) is/are blank. Please ensure that all required information is submitted together with the Application Form. Where the information sought is not applicable or not available, please fill in "NA".

Applicant organisations should provide the best and fullest information in their applications, and the Research Projects Vetting Sub-committee Secretariat is not obliged to request additional information from applicant organisations.

Applicant organisations are required to provide additional or supplementary information in relation to their applications upon request.

2

Application form available in ECF website:

<https://www.ecf.gov.hk/en/application/index.html#rtdcp>

- Completed application form (in both hard and soft copies in word format) must be returned before

6 p.m. on 20 August 2021 (Friday) to:

**ECF Research Projects Vetting
Subcommittee Secretariat
5/F, Southorn Centre
130 Hennessy Road
Wan Chai, Hong Kong**

- Please ensure **sufficient postage**

Enquiries

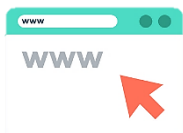
ECF Research Projects Vetting Subcommittee Secretariat



2835 2308



rtdc@epd.gov.hk



<http://www.ecf.gov.hk>





Thank You





Q&A

