







Research and Development Projects

Now calling for 2024 - 2025 applications



APPLICATION START DATE





BRIEFING



25.9.2024 APPLICATION DEADLINE



The Briefing Session will cover:

- 1 Welcoming Remarks
- Introduction of the Environment and Conservation Fund (ECF) 2 and Research and Development (R&D) Projects
- **Priority Topics** 3
- 4 Notes on Application
- 5 Vetting Process and Criteria
- 6 General Requirements of Projects and Disbursement of Funds



The Briefing Session will cover:

- Welcoming Remarks



Welcoming Remarks

Prof Jimmy Chi Hung FUNG Chairman **ECF Research and Development Projects Vetting Subcommittee**





The Briefing Session will cover:

- Introduction of the Environment and Conservation Fund (ECF) 2 and Research and Development (R&D) Projects



Introduction of ECF

Established in 1994 to support green projects and activities

Three Major Funding Schemes

Research and Development Projects Open for application! Formerly known as "Environmental Research, Technology and Conference Projects"

Publicity and Education Projects

Formerly known as "Environmental Education and Community Action Projects"

Practice and Action Projects

Formerly known as "Community Waste Reduction Projects"

Safeguarding National Security

Applicant organisations has to submit an **Agreement (Annex I of the application form)** along with the application form, to confirm the organisation has acknowledged and undertaken to comply with the following clauses:

- the Government reserves the right to **disqualify** the recipient organisation on the grounds that it has engaged, is engaging, or is reasonably believed to have engaged or be engaging in acts or activities that are likely to cause or constitute the occurrence of offences endangering national security;
- or otherwise the exclusion of the organisation from future applications is necessary in the interest of national security, or is necessary to protect the public interest of Hong Kong, public morals, public order or public safety.

Safeguarding National Security

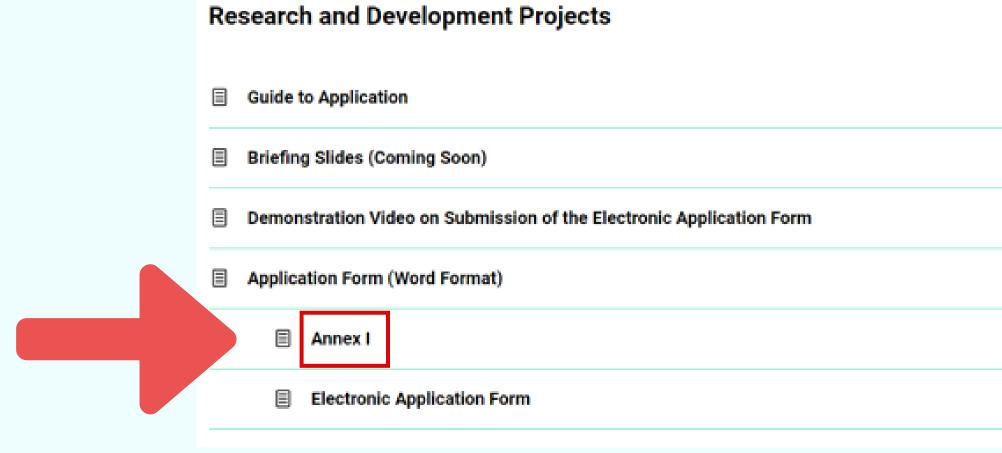
Even after the application is approved, the Government may immediately withdraw or cancel the relevant approval upon the occurrence of any of the following events:

- the organisation has engaged or is engaging in acts or activities that are likely to constitute or cause the occurrence of offences endangering national security or which would otherwise be contrary to the interest of national security;
- the continued engagement of the organisation or the continued implementation of the ECF project is contrary to the interest of national security; or
- the Government reasonably believes that any of the events mentioned above is about to occur.



Safeguarding National Security

An application will be considered **invalid** if the **Annex I of the Application Form** is not duly signed and submitted by the applicant organisation.





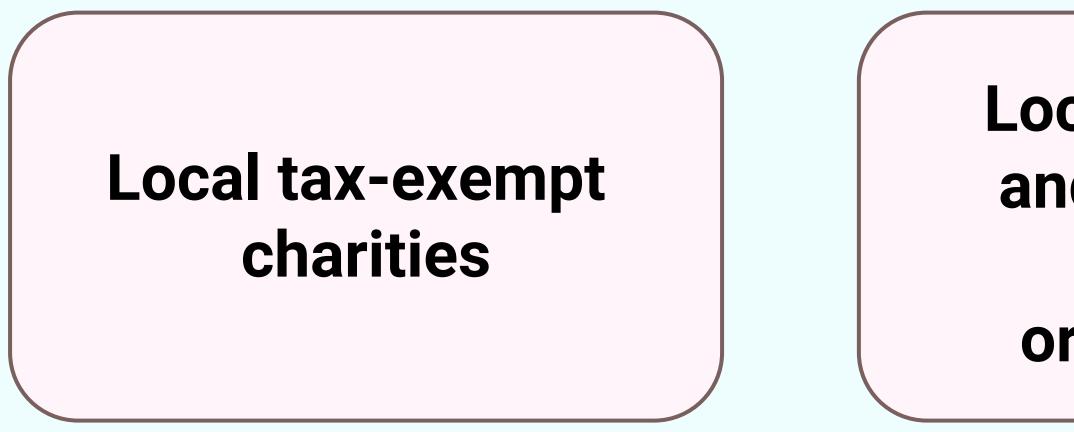
Application proposals with elements of national education and patriotism may be comparatively meritorious.



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Introduction of R&D Projects

Local **non-profit making organisations** are eligible to apply





Local registered and non-profitmaking organisations

Introduction of R&D Projects

Research Projects and Technology Development and 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.

Conference Projects

- Green and sustainable in nature, and facilitate exchange of best practices, expertise and experience in environmental protection and conservation issues.
- Raise Hong Kong's profile as a leading green city.



2023-24 Application Results

Results of 2023 invitation exercise :

Total no. of applications received	171
No. of projects supported	44
No. of projects not supported	127
Approved amount	\$28M



Supported 36%

Not **Supported** 64%

2024-25 Invitation for Applications

Application Period

From 26 July to 25 September 2024 (deadline at 6:00 p.m.)

Budget

\$35 million in total, including \$3.5 million for Conference projects

Notification of Results

Tentative by March 2025



The Briefing Session will cover:

- **Priority Topics** 3



Priority Topics



- Biodiversity and Conservation
- Climate Change Mitigation, Adaption and Resilience
- Construction and Traffic Noise Prevention and Mitigation
- Waste Management, Reduction and Recycling
- Water Quality and Water Pollution

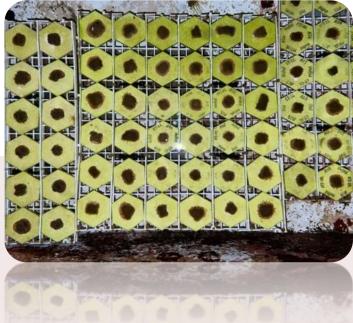
Listed in Appendix II of Guide to Application

Air Quality

- Development and application of technologies for Greenhouse gas monitoring
- Development and application of Internet of Things (IoT) sensors with prediction models for monitoring indoor air quality (IAQ) and integration with building management systems for improving IAQ
- Fixed sniffing system for monitoring real-time emissions from vessels and thereby analysing the sulphur content of marine fuel used
- Air quality monitoring and emission measurements using remote sensing devices and technology
- VOCs monitoring technology
- Cohort study on the long-term health impact of exposure to air pollution in Hong Kong

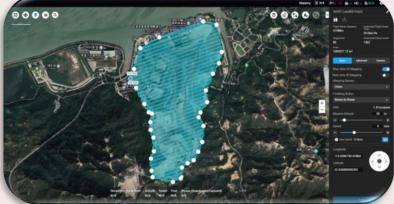
Biodiversity and Conservation

- Nature-based solutions and their local applicability
- Nature-based management approach of wetland for public appreciation
- Baseline studies on understudied taxa groups of potential conservation concern
- Studies on conserving threatened species
- Studies on invasive alien species
- Impact of climate change on local ecosystems
- Development of smart technologies, tools or systems that facilitate monitoring and / or management of wildlife or habitat, aid enforcement against wildlife crime, or promote sharing of ecological knowledge
- Use of molecular tools (e.g. eDNA) in monitoring of biodiversity · Assessment and valuation of ecosystem services provided by natural habitats or
- green and blue spaces in urban settings



Climate Change – Mitigation, Adaptation and Resilience

- Technologies and policy instruments for promoting cost effective applications of netzero electricity generation, renewable energy, energy conservation and green building, green transport and waste reduction and management
- Smart technologies which promote adoption of low-carbon living in Hong Kong
- Use of smart technologies to compile carbon emission data of companies / organisations in certain sectors (e.g. financial services industry or property management sector etc.)
- Innovative education technology (EdTech) to promote public education on climate change and low-carbon lifestyle or to provide capacity building

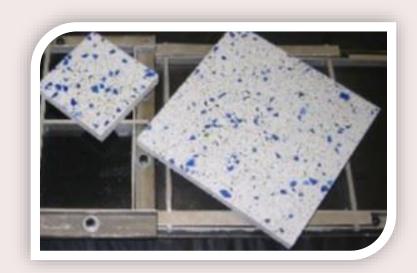


Construction and Traffic Noise – Prevention and Mitigation

- Mobile construction noise barriers
- Quieter construction equipment; quieter methods for general construction, road resurfacing and building demolition works
- Domestic renovation noise reduction (e.g. quieter equipment or method to dismantle tiles)
- Traffic noise mitigation designs and measures for incorporation in residential developments
- Acoustic metamaterials and active noise cancellation devices to enhance the performance of noise mitigation design
- Light-weight and/or ventilated design for noise barriers/enclosures on existing/new road or boundary structures of building developments
- Low noise road surfacing for local roads
- Application of AI technology in sound recognition of domestic noise, domestic renovation noise and construction noise
 Smartphone application with self-calibration capability for reasonably accurate
- Smartphone application with self-calibration capabi measurement of sound level and its frequency spectrum

Waste Management, Reduction and Recycling

- Reduction waste at source
- Animal waste treatment technologies
- Reduction of printed circuit board (PCB) waste
- Optimised design for improved reparability of electrical appliances
- Innovative technology for reuse, recycling, or treatment of large amount of dredged / excavated sediment
- Handling and recycling mixed non-inert construction waste
- Solution to enhance at source separation of construction waste
- Green construction materials



Waste Management, Reduction and Recycling (Cont'd)

- Handling and recycling mixed plastic waste with low recycling values
- Bulk collection of the plastic beverage containers
- Food waste and yard waste management
- Economic studies on the effectiveness of Product Responsibility Scheme on waste reduction and recycling
- Environmentally-friendly packaging materials
- Circular Economy and Reverse Logistics, application of big data and AI
- Innovative recyclables collection and management system

Water Quality and Water Pollution

- Innovative technology for on-site sewage treatment in remote area (e.g. eco-smart toilet in countryside)
- Innovative techniques for use in sewer condition survey and rehabilitation
 Smart technologies for 3D visualisation and asset management of underground
- Smart technologies for 3D visualisation and asset sewerage and storm-drain networks
- Innovative technology for Leachate treatment
- Odour mitigation technology for sewerage facilities and sewage-polluted storm drains
 Advanced technology to improve sewage treatment efficiency to reduce energy
- Advanced technology to improve sewage treatment consumption
- Innovative technologies for preventing microplastics from entering the water environment
- Assessment of ecological and human health risks of microplastics present in the aquatic environment
- Risk assessment of antibiotics, anti-microbial resistance and antibiotic-resistant genes in the environment and sewage

Water Quality and Water Pollution (Cont'd)

- Smart technologies in the recognition, monitoring, tracking, capturing and / or mapping of floating / marine refuse in watercourses and coastal region
- Real-time water quality measurement and analysis system for nutrient and bacteriological parameters at inland, near-shore and open waters
- Satellite imagery and remote sensing applications for wide-area marine water monitoring and environmental incident remediation
- Big data analysis of water quality, meteorological and other data for deriving deeper understanding of the correlation and dynamics of different parameters
- Innovative technologies for cost-effective removal of phosphorus in wastewater and environmental waters
- Innovative treatment technology for oily wastewater from restaurants in Hong Kong

The Briefing Session will cover:

- 4 Notes on Application



How to Apply?

• Fill in an electronic application form https://eform.cefs.gov.hk/form/epd006/en/

If your organisation is unable to fill in the e-form, you may choose to: Download application form from ECF website <u>www.ecf.gov.hk</u>

In person or by post to the Secretariat
 5/F, Southorn Centre, 130 Hennessy Road, Wan Chai, Hong Kong

By email to the Secretariat
 <u>ecf@eeb.gov.hk</u>



Application Deadline

- Completed application form must be submitted before 6:00 p.m. on 25 September 2024. If the applications are submitted by post, the **postmarks should be dated on or before 25** September 2024.
- For paper-based application forms, both original hard copy and soft copy (in "Word" format) of the application form shall be submitted.
- Late or incomplete applications will not be processed.



Applicant organisations should provide the **best and fullest** information in their applications and provide supporting documents.

Before submitting application, please read carefully the **"Guide to Application** – **Research and Development Projects**"

	e tick the appropriate box to check if the documents required are provided for application 國當室格內填上「✓」號以查對是否已提供申請所需文件:
App	licable to all applicant organisations 適用於所有申請機機:
	Annex I - Agreement on safeguarding national security 附件 I - 維護國家安全確認書
	Duly signed Personal Data Collection Statement 已簽署的收集個人資料的聲明
	Original of the duly completed "Application Form" with the signature of the p applicant organisation and affixed with the original seal of the organisation 已填妥的「申請表格」正本,須附有申請機構項目負責人簽则 正本印章
	Section B – Details of the project's methodology 乙部一項目推行方法的詳情
	Section B Curriculum Vitae of the Principal Investigator (limited to 2 pages) 乙部一主要研究人員的履歴(最多兩頁)
	Section C-Nomination of External Experts as Assessors (only to be filled by In a budget of over HK\$500,000 for Research Project or Technolog Demonstration Project.) 內部一提名外界專家擔任評審員(只供申請資助超過 50 萬元會 發展及示範項目的研究人員填寫)
App	licable to first-time applicant organisation only 只適用於首次申請
	Completed Supplementary Sheet for First-time Applicant Organisation 已填妥的首次申請機構資料補充頁
	A copy of the letter issued by the Inland Revenue Department on tax-exemption the Inland Revenue Ordinance (Cap.112) (if applicable) 权務局就根據(稅務條例)(第112章)第88條所作豁免徵 副本(如適用)
	A copy of the registration document of the organisation 機構的註冊文件副本
	A copy of the organisation's Articles of Association 機構的組織章程細即副本

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person-in-charge of the

界及蓝上申请機構

nvestigator(s) seeking y Development and

的研究項目或技術

機構:

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脱安排發出的前件

Probity Clauses



廉政公署今(10日)落案起訴賽馬會長洲鮑思高青年中心前顧問·控告 他涉嫌就一個節能項目欺詐及使用虛假文書,因而從該青年中心及環 境保護署轄下一個基金取得共逾38萬港元款項·被告將於本周五(12 日)在東區裁判法院應訊·以待案件轉介區域法院答辯。





前顧問今在區域法院承認2項欺詐,另外2項使用虛假文書則由法庭存檔。資料圖片

假文書呃環保署3.64萬津貼前顧問認罪囚5個月

Like 0

擁有博士學歷的賽馬會長洲鮑思高青年中心前環境項目顧問,2012至14年故意向環保署和青年中心作 虚假陳述, 和隱瞞自己初創環保工程承辦公司的幕後負責人的身份, 獲得3.64萬元的工程項目津貼。 前顧問今在區域法院承認2項欺詐,另外2項使用虛假文書則由法庭存檔。法官斥被告知法犯法,最終 被告雖損手而回,但仍非抗辯理由。法官念及他多年在環保界的貢獻,終判他入獄5個月。

Points to Note

- Project duration: normally not more than 3 years.
- No. of application: each Principal Investigator (PI) can submit **ONE** application for research project or technology development and demonstration project and ONE application for conference project.
- No. of approved projects: each PI can concurrently hold **TWO** ongoing research projects or technology development and demonstration projects and ONE ongoing conference project.

Points to Note

- Applications from Universities/THEi must be submitted through the respective **Research Offices (ROs)**.
- ROs must confirm the eligibility of the PIs and the need to include Co-Investigator(s).
- 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 institution proper.



Matters to be Avoided

- Have not properly filled in the application form with part(s) not applicable crossed out.
- Have not submitted duly signed application form/document(s) (applicable) to paper-based application).
- Not using the specified format to fill out the application (e.g. customising) the format of the budget table of the project).



Demonstrable Needs of the Project

• List out the innovative element(s) of the proposed project and difference(s) compared to similar projects (e.g. research method, methodology, target group, study scope, or deliverables etc.).

> e.g. the proposed project will present a novel contribution to the waste management field through integration of a new resource recovery technology for municipal solid waste in Hong Kong. No previous research has been conducted in Hong Kong.





Expected Benefits of the Project

- Deliverables and performance indicators of the project.
- Dissemination and/or knowledge and technology transfer.

e.g. the number of papers to be submitted or presented; dissemination of the project results through e-newsletters, websites, exhibitions, online seminars/workshops, etc.; the number of media coverage on the programmes; and the technologies transferred to stakeholders.



Overall Effectiveness of the Project - For Research Projects and Technology **Development and Demonstration Projects**

• State how the deliverables and performance indicators of the project can be applied to environmental improvement and conservation of the local environment (including its direct and indirect contributions/merits).

> e.g. the deliverables can be directly applied to the reduction in exhaust emissions from local restaurants, which can also improve the health of citizens.

 State how the project make contribution(s) to academic advancement in the field of environmental improvement and conservation.

> e.g. the project could establish a foundation for the development of know-how for future studies on alternatives to microplastics, thereby driving further technological advancement.

Overall Effectiveness of the Project - For priority topic relating to "Biodiversity" and Conservation"

- The applicant organisation shall specify whether the project involves any collection of species occurrence data (location coordinates).
- The successful applicant organisation is required to submit the species occurrence data in a standardised data requisition form, together with the completion report and statement of accounts.
- The Agriculture, Fisheries and Conservation Department will use the submitted data for public viewing. The data requisition form can be downloaded from the ECF website.

Overall Effectiveness of the Project - For Conference Projects

• State how the project facilitates the exchange of practices, expertise and experience on environmental protection and nature conservation among relevant practitioners, academia and professionals.

> e.g. the conference will provide both face-to-face and online platform for experts from different countries to provide insights and exchange technologies on waste management in Hong Kong.



Plan to sustain impacts upon project completion and sustainability

State the plan to sustain impacts upon project completion including but not limited to:

- State whether the project findings can be adopted / utilised by government departments / relevant sector in Hong Kong.
- The project findings will attract other source of fundings for further development or developing a new research project.
- Share the database of the project findings with relevant research institutions to sustain its impacts.

Plan to sustain impacts upon project completion and sustainability

Specify whether there is a possibility that the funded project output may generate significant income after project completion. If so:

- Confirm the project is not commissioned by a commercial body to conduct the study or part of the study for deriving an income and no such agreement has been signed with any commercial body; and
- Confirm and justify how the proposed project could meet the non-profit making. nature and satisfy the related requirements as prescribed in the Guide to Application.

Budget

- Funding for publication of results will normally not be supported.
- Funding for patent fees will normally not be supported.
- Funding for production of printed promotion materials will not be supported.
- The grant shall not be used as payments to any individual member of the public as a **financial reward** for participation in the activities associated with the project.



Nomination of External Experts as Assessors

- Seeking a budget of over HK\$500,000, nomination of five external experts as assessors is required in the proposal.
- Declare any past and present relationships between the Investigator(s) (i.e. the Principal Investigator and the Co-Investigator(s)) and the nominated external assessors. Each Investigator should complete a separate form to indicate, for each external assessor, the nature of the relationship and provide details.



The Briefing Session will cover:

- **Vetting Process and Criteria** 5



Vetting Process



The vetting process will normally be completed within 6 months

Competition-based Vetting Mechanism

The following marking scheme is adopted to evaluate the merits of the applications and select the most meritorious applications for the consideration of the Vetting Subcommittee.

	Scoring Weight (Percentage of Total) Applied Amount of Funding			
Assessment Criteria				
	=HK\$500,000</td <td>>HK\$500,000 <!--=HK\$2,000,000</td--><td>>HK\$2,000,000</td><td></td></td>	>HK\$500,000 =HK\$2,000,000</td <td>>HK\$2,000,000</td> <td></td>	>HK\$2,000,000	
Quality of the proposed project	60%	55%	50%	
Effectiveness of the proposed project	25%	25%	25%	
Capability and track record of the applicant organisation*	15%	20%	25%	

* Applicant organisation includes the organisation itself and/or the principal investigator/project team

Competition-based Vetting Mechanism

If the proposed project fails to score half or more of the relevant scoring weight in any of the assessment criteria (e.g. a project seeking a budget HK\$2,500,000 fails to get 25% of the total score in "Quality of the proposed project", the application will **not be considered**.)

	Scoring Weight (Percentage of Total)			
Assessment Criteria	Applied Amount of Funding			
	=HK\$500,000</td <td>>HK\$500,000 <!--=HK\$2,000,000</td--><td>>HK\$2,000,000</td><td></td></td>	>HK\$500,000 =HK\$2,000,000</td <td>>HK\$2,000,000</td> <td></td>	>HK\$2,000,000	
Quality of the proposed project	60%	55%	50%	
Effectiveness of the proposed project	25%	25%	25%	
Capability and track record of the applicant organisation*	15%	20%	25%	

* Applicant organisation includes the organisation itself and/or the principal investigator/project team

Competition-based Vetting Mechanism

- Research project and/or technology development and demonstration project application(s) submitted by a PI who is already undertaking two approved on-going research projects and/or technology development and demonstration projects with overlapping project periods will not be approved.
- incomplete applications may lose competitiveness. The Vetting • Any Subcommittee or the Secretariat is not obligated to contact the applicant organisations for missing information or clarification.
- Welcome to call the ECF hotline at 2835 1234 for enquiries.

Main Reasons for Supporting the Applications

- The project is creative, echoes the theme of government policies, and not duplicating with the approved projects.
- The project is **well-planned** and the implementation plan is reasonably practicable.
- The project has clear indicators and can achieve **significant outcomes**, and with credible monitoring and evaluation mechanisms for measurement.
- The proposed budget is **reasonable**, prudent and **cost-effective**.
- The track record of the applicant organisation is good.
- The applicant organisation possesses the knowledge, technical capability and resources to run the project.

Main Reasons for NOT Supporting the Applications

- Incomplete application form and/or required documents are not submitted.
- The PI already has **TWO** on-going research projects or technology development and demonstration projects and **ONE** ongoing conference project, of which the project periods overlap with the proposed project period of the new application.
- The applicant organisation has unsatisfactory performance and/or frequent delay in report(s) submission in their past project(s).
- The proposed project is too theoretical in nature.
- The proposed project has already been conducted by other researchers or that the technologies are already available in the market.

The Briefing Session will cover:

- 6 General Requirements of Projects and Disbursement of Funds



Reporting Requirements

Type of Report	Reporting Period and Deadline of Submission	
Progress Report	Report every six months Submit within one month after the reporting period	Report position in phase
Completion Report	Report the whole project period Submit within two month after project completion	Report o original (statemo submit a reasona

Recipient organisation may be required to report project outputs regularly via smart electronic means.





Report Content

progress, performance and financial n (statement of accounts) of the project e

outcome(s) (including comparison with target(s)) and **financial position** nent of accounts) of the project, and along with the auditor's report(s) with able assurance, if applicable.

Statement of Accounts and Auditing Requirements

For the 22 degree-awarding higher education institutions in Hong Kong:

• Regardless of the amount of grant involved in a project, a statement of accounts certified by the **finance office of the university** is acceptable. No need to follow the auditing requirements.

For other recipient organisations:

- Audited statement of accounts must be submitted together with the **completion** report.
- Note: auditors engaged to perform the reasonable assurance audit must comply with the requirements provided in the "Notes for Auditors of Recipient Organisations" and "Sample Auditor's Report" in Appendices VII and VIII respectively of Guide to Application.

Auditing Requirements

Funding Amount	Statement of Accounts	Audited Statement of Accounts	Supporting documents of the expenses
Below HK\$150K			
HK\$150K or above and below HK\$300K		 Recipient organisation may opt to submit: 1. Audited statement of accounts (no need to attach supporting documents of the expenses), <u>OR</u> 2. Non-audited statement of accounts (need to attach supporting documents of the expenses). 	
HK\$300K or above		*For projects lasting more than 18 months, organisations are required to submit once every 12 months .	

Publicity of Project

To acknowledge the source of funding, the ECF logo should be clearly marked on all publications and publicity materials related to the project and project activities.



Information of the projects may be uploaded to the websites of ECF or EPD for public access.

<u>https://www.ecf.gov.hk/en/approved-projects?view=research</u>





Criteria for disbursement of funds	Estimated % of Disbursement	
Upon signing of the funding agreement and submission of the completed auditor undertaking form (if applicable)	maximum 50%	Depen impler
Upon submission of a progress report with financial position and satisfactory performance	Further disbursement	Depen the pro
Upon submission of completion report with a statement of accounts and auditor's report (if applicable) and subject to endorsement by the Vetting Subcommittee	10%	Depen

Remarks

nds on the content of mentation plan

nds on the **financial position** and rogress of the project

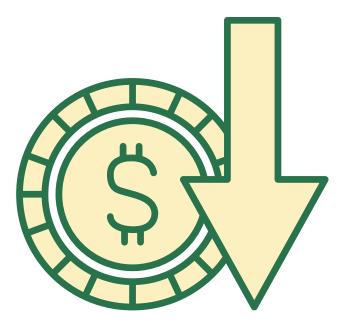
nds on the actual expenditure



- The final amount of funding depends on the **content of individual application**.
- Funding cap will be set for individual budget items (e.g. staff cost for research supporting staff and attendance of overseas conferences).
- Flexible use of approved funds among budget items under the same category may be allowed. The arrangement will be detailed in the Approval Letter.
- Requests for additional funding after project approval will normally not considered.

Reduction of the Amount of Funding Disbursement

In the case of **unsatisfactory performance** or for any reason that the recipient organisation is unable to attain the project targets with no reasonable justification, the Vetting Subcommittee reserves the right to **reduce the amount of the funding disbursement** based on the performance of the recipient organisation, by taking into account of the **percentage of the quantifiable** targets achieved and/or other factors which deemed relevant.





Suspension / Termination of Funding Support

- The project does not commence within one year of the approval of the grant and no reasonable explanation has been given.
- The project has not progressed satisfactorily and no reasonable explanation has been given.
- The **principal investigator leaves** the recipient organisation prior to the completion of the project and no one is considered suitable to take over the role.
- The recipient organisation fails to submit the required report and/or achieve the deliverables by the deadline stipulated.
- The recipient organisation fails to make proper acknowledgment of the ECF.
- The recipient organisation fails to comply with the funding conditions as set out in Guide to Application and the approval letter and no reasonable explanation has been given.



The Government may **immediately terminate** any agreement with the organisation upon the occurrence of any of the following events:

- the organisation has engaged or is engaging in acts or activities that are likely to constitute or cause the occurrence of offences endangering national security or which would otherwise be contrary to the interest of national security;
- the continued engagement of the organisation or the continued implementation of the ECF project is contrary to the interest of national security; or
- the Government reasonably believes that any of the events mentioned above is about to occur.



Research and Development Projects Vetting Subcommittee Secretariat



Research and Development Projects

Now calling for 2024 - 2025 applications



APPLICATION START DATE





BRIEFING



25.9.2024 APPLICATION DEADLINE

