

## **Executive summary:**

This report provides a summary of the achievements of the ACCESS4EU:NZ project, which sought to highlight opportunities and facilitate access for researchers from the European Union (EU) and Associated Member States to New Zealand's publicly-funded research and innovation programmes. It also aimed to establish an evidence base to inform the bilateral EU-NZ science and technology dialogue, and provide input to the Joint Science and Technology (JSTC) meetings that underpin the 2008 Science and Technology Cooperation (STC) Agreement signed between the European Community (EC) and NZ.

The ACCESS4EU:NZ project has been successfully completed, with cooperation from all Project Beneficiaries and advisory assistance from the Project Board. It has fully achieved its objectives and technical goals with minor adjustments to the project requirements, despite two major events having an impact on the delivery of key tasks and activities. First, the Christchurch earthquakes in September 2010 and February 2011 caused significant business disruptions affecting the timely completion of project deliverables. Second, the merger of the Ministry of Research, Science and Technology (MoRST) with the Foundation for Research, Science and Technology (FRST) to form the new Ministry of Science and Innovation (MSI) in 2011, and once again merging with three other government ministries in 2012 to form the new Ministry of Business, Innovation and Employment (MBIE), has also had a significant impact on the completion of all project deliverables, and necessitated all reports to be amended to incorporate the changes in the NZ research policy and research funding system.

## **Project Context and Objectives:**

### **Project context**

There is a long history of cooperation between researchers from Europe and NZ. A 2003 survey conducted by MoRST found that over half of all NZ-based researchers are actively engaged in research collaboration with at least one European partner. However, this collaboration has traditionally been bilateral activities between NZ and the United Kingdom (UK), Germany or France-three of the major research 'powerhouses' of the European Union (EU). Whilst evidence from data on co-authoring of academic outputs suggests that collaboration between NZ and the EU has been increasing over the last decade, there is little understanding of the exact mechanisms of how this collaboration has been supported or initiated.

With the signing of the STC Agreement between the EC and NZ in July 2008, and the establishment of formal bilateral planning activities through the JSTC meetings, there has been a renewed impetus for closer EU-NZ cooperation, led by the EC and MoRST, and now the MBIE . However, to date, the main focus of NZ government-supported joint science and technology activities has been on the participation of NZ researchers in European activities, specifically under the aegis of the European Commission's Framework Programme for Research and Technological Development (FP7).

The ACCESS4EU:NZ project seeks to improve understanding of this collaborative research relationship and redress the balance in this relationship, by highlighting opportunities and facilitating access for European researchers to NZ's publicly-funded research and innovation programmes. It aims to establish a platform to increase awareness and dissemination, within EU Member States and Associated Countries , of opportunities for European researchers and research organisations to participate in NZ's publicly-funded research and innovation programmes. The ACCESS4EU:NZ project acknowledges the importance of improving the provision of information on research opportunities available to European researchers in NZ, and the identification of prospective NZ partners with whom European researchers can collaborate, as key to enhancing this collaborative research relationship.

### **Project objectives**

The overall objectives of the ACCESS4EU:NZ platform are two-fold. First, it aims to increase awareness and dissemination of access opportunities for European researchers in NZ's

national research and innovation programmes. Second, it aims to provide outputs that would be useful in the context of the JSTC meetings and the STC agreement between the EU and NZ.

A series of five integrated work packages, each representing a specific project objective, have been designed to ensure that the overall objectives are achieved within the duration of this project (39 months):

-WP1: Mapping of access opportunities

WP1 provides an overview of NZ funding schemes that can be accessed by researchers from the EU Member States and Associated Countries, and identifies prospective NZ partners.

-WP2: Dissemination of information on access and opportunities

WP2 disseminates the data collated in WP1 to the broadest possible European audience, through a website and development of training materials for information multipliers.

-WP3: Building EU-N researcher connections

WP3 builds EU-NZ researcher connections, through workshops and networking events.

-WP4: Monitoring and Feedback

In WP4, surveys of numbers of research collaborations and the process/policy environment within which these collaborations were developed are carried out to ensure the project informs policy dialogue between NZ and the EC.

-WP5: Project Management

WP5 specifies activities relating to overall project monitoring and decision-making.

## **Project Results:**

### **WP1: Mapping of access opportunities**

#### **i)D1.1 NZ schemes information materials: programmes and rules**

The Coordinator/Beneficiary 1 (University of Canterbury, 'UC'), with guidance and technical expertise from Beneficiary 3 (Royal Society of New Zealand, 'RSNZ'), conducted a mapping exercise to identify access and opportunities for European researchers in NZ's publicly-funded science and innovation programmes.

The study involved the UC spending a week at the RSNZ offices in Wellington to become familiar with the funding processes of NZ's three Funding and Investment Agencies (FIAs) - the RSNZ, the Health Research Council (HRC) and FRST - and the UC and RSNZ contacting FIA representatives between March and July 2010 to obtain information regarding the eligibility criteria for publicly-funded programmes which European researchers may be able to access.

During the initial contacts with the FIA representatives, an outline of the project was provided, along with a summary of the relevant Work Package components. The FIA respondents offered enthusiastic support to the project, and provided relevant contracting data, noting aspects of transparency and acknowledging the opportunities that the projects could provide to promote NZ research through EU-NZ connections.

The initial draft presented data which was collected through a combination of desk-research and key informant interviews with FIA representatives.

On 1 February 2011, FRST and MoRST amalgamated to form the MSI . Following this merger, the relevant data was formally requested from MSI to ensure that the information contained in the draft report was up-to-date.

The final report incorporated important changes in the NZ Research, Science and Technology (RS&T) system, and the impact these changes may have had on the eligibility of European researchers to access publicly-funded research. The data collated and presented in the report specifically included:

- (a) An overview of the NZ research and funding system and how it operates;
- (b) Rules, conditions and eligibility criteria for accessing NZ's publicly-funded research and innovation programmes; and
- (c) Specific rules and conditions for European participation in NZ's publicly-funded research and innovation programmes, including compliance-related costs.

## **Key findings**

The key findings from this study suggest that in terms of FIA-funded programmes, while it is a general requirement that the project's lead agency be based in NZ, the involvement of researchers from third countries are nevertheless welcome, and generally encouraged.

The Terms of Reference of the Marsden Fund (RSNZ) stipulate that applicants be:

[...] New Zealand-based researchers undertaking research to be carried out in New Zealand or overseas if its nature demands that it be carried out elsewhere. Collaborating researchers from outside New Zealand are able to be included in proposals, but are not able to receive direct funding support for their time or institutional costs [emphasis added].

The Marsden Fund's eligibility criteria have been updated for 2011 to define 'New-Zealand-based' as being based in New Zealand for 0.5 FTE (or more) per year. While collaborating researchers from outside NZ are not able to receive direct funding support for their time or institutional costs, costs associated with collaboration, such as travel and accommodation costs, may be covered under 'direct costs' and receive funding.

The HRC funds individual projects of 3-year duration, or larger, multi-disciplinary programmes for a maximum of six years. In regard to eligibility conditions for all HRC Proposals or Contracts, section 1.3.4 of the HRC Rules (2007) stipulates that:

First Named Investigators will usually be required to have New Zealand as their principal domicile and place of employment and be employees of the Contractor. However, at HRC's discretion, a First Named Investigator domiciled overseas may be a co-investigator on a Contract. If financial support is required for individuals who are not employees of the Contractor (irrespective of whether they are in New Zealand or overseas), a copy of the relevant signed subcontract must be submitted to HRC for approval at the time of filing the

Proposal. HRC will not contribute to the overhead of investigators whose principle domicile is outside New Zealand [emphasis added].

First Named Investigators are usually required to be based in NZ and be employed by a NZ contractor. However, the HRC has the discretion to award funding to research projects led by a First Named Investigator based overseas, and investigators outside New Zealand may claim salary, but not their institutional overheads, from the Council.

Section 10(3) of the Research, Science and Technology Act 2010 (MBIE) stipulates that the Science Board is responsible for making decisions for funding used predominantly by research organisations. The funding decisions made by the Science Board are expected to enable NZ research organisations to conduct high-quality research creating economic, social and environmental benefits for NZ. The criteria for the assessment of proposals by the Science Board commence on 1 February 2011, and reflect the criteria applied by FRST, consistent with the Ministerial Directions issued under the Foundation for Research, Science and Technology Act 1990 in June 2010.

The research funding approved by the Science Board applies to the following output expenses:

- Biological Industries Research
- High Value Manufacturing and Services Research
- Energy and Minerals Research
- Environmental Research
- Hazards and Infrastructure Research; and
- Health and Society Research .

For these output expenses, there is an explicit provision that 'International collaboration will be supported where this is relevant and of benefit to the objectives of the fund'. This means that the MBIE will fund projects that include international collaboration if these would be beneficial to NZ, and if the involvement of overseas researchers will add value to the projects and outcomes for NZ.

## Outputs

As part of the dissemination activities under WP2 of the ACCESS4EU:NZ project, open calls for NZ research projects and programmes open to European researchers were made accessible on the RTDI database on the common web portal at <http://www.access4.eu>. This database was maintained and updated on a regular basis, and made the eligibility rules and application process as clear as possible to the European audience. The links to the actual application forms and guidelines were also provided on the database, and the contact details of the representatives of the FIAs responsible for the projects were clearly set out.

The outputs of the D1.1 report also formed the content for use on the ACCESS4EU: NZ website (WP2) and training materials disseminated to European researchers (WP2).

### ii) D1.2 Report on NZ capability gaps

This study delivers project objective 2, namely: To identify gaps in NZ capability and focus on European collaboration opportunities. The data collected demonstrates the current and anticipated needs of NZ as defined by the NZ Government, the external and internal challenges driving innovation and change in the NZ RS&T system, as well as expectations from and commitment by, NZ's funding and research providers to maintain, or increase, their scientific productivity.

The data presented in this report was collected through the following approaches:

- 1) Mapping the capability landscape of NZ research, specifically in the context of delivering the NZ 'research agenda';
- 2) Identifying any gaps in NZ research capability with respect to the NZ 'research agenda';
- 3) Identifying opportunities for research collaboration with EU Member and Associated States, and in particular, how this collaboration can fill the gaps in NZ research capability; and
- 4) Mapping areas currently funded both within NZ and the European research systems.

In identifying the NZ 'Research Agenda', the report relied on the content analysis of official statements, documents and publications released by NZ's policy agencies, public research

investment agencies and research providers/organisations that make up the NZ research and policy system.

In identifying NZ's research strengths and capability, the report first looked at NZ's overall research performance through its scientific publication productivity. It then looked at the subject specialisation of NZ research, its scientific publication productivity by subject, the number of NZ researchers by subject area, and the impact of NZ publications by subject.

As a first step towards determining NZ's research capability, bibliometric analyses of NZ's peer-reviewed research publications, covering data derived from Scopus (Elsevier) and the Web of Science (Thomson-Reuters), were examined to establish NZ's science performance in relation to that of the Organisation for Economic Cooperation and Development (OECD) and the world as a whole. Analysing NZ's publication output provides insight into the nature of its scientific activity and the level and degree of its productivity.

In examining NZ's overall research performance, this report relied largely on the findings of a bibliometric report covering the period 2002–2007 produced for MoRST by Gush et al (2010). NZ's total global share of publications in the OECD, its research publications per capita vis-a-vis other OECD countries, its ranking in regard to number of publications per researcher, and its OECD ranking in publications per dollar spent on basic research were all looked at.

In order to identify the areas of strength, weakness and specialisation of NZ research, the study looked at the distribution of NZ scientific publications by subject area from 2002-2008. The data illustrating the total number of scientific publications by research sector and subject area was obtained from Scopus.

Scopus data with respect to citation rates for citable content published from 2002 to 2006 were analysed by subject area to examine the impact of NZ's scientific publications. While citations represent an indicator of research quality, rather than a direct measure of it, citation analysis is the most commonly used method of measuring the impact of a particular publication, with the frequency and timing of citations to a document considered as an indication of its utility. The study reviewed the impact and volume of NZ publications across subject areas, by the sectoral-affiliations of the authorship, and where possible contrasts these with other OECD nations.



Research 'strengths' were measured in terms of citation rate, based on calculations using the Subject-normalised Impact Factor (SIF). The SIF is the mean citation rate for a set of publications, normalised by the expected number of citations received for all items in the same subject or discipline that were published in the same calendar year. Observing trends in subject impact across a series of years provided insight into the sustained areas of research 'success' for each institution. As a somewhat arbitrary proxy of excellence, for a subject to be counted as an institution's strength, the institution must have exceeded a threshold SIF value of 1.2, and have published in at least four out of the five years considered. By definition, a value of 1 shows articles receiving the number of citations expected for items of their age and subject, while those achieving a SIF of 1.2 and 2.5, placed in the upper quartile and top decile respectively for articles of their subject published within the OECD.

The subject specialisation of NZ's research agencies provided a broad view of national research productivity and impact, and contrasted with the policy areas listed in NZ's 'research agenda', provided an indication of potential gaps in NZ's research capability where European research expertise may be particularly valuable. Subject areas were somewhat arbitrary 'group aggregates of disciplines' and such groupings may mask the overall activity of disciplines they contain. Nevertheless, this approach provided a relatively objective measure means of identifying NZ's research strengths.

'Specialisation' is a measure of the institutions' focus in publishing a given subject. The areas of specialisation identified in the report were based on the Subject Specialisation Index (SSI), which measures the degree to which the organisation is publishing more (or less) in the subject relative to the output of an appropriate set or comparator group, e.g. the subject specialisation of New Zealand against the research output of the rest of the OECD, or a university compared with all other New Zealand research organisations.

The number of research staff undertaking research of a world-class standard can also be considered as a measure of research strength. The report used the number of researchers scoring highly in the TEC's 2006 assessment of the PBRF as an indicator of strength in the different subject areas relevant to NZ's research agenda. However, as the PBRF is entirely an activity for the TEI's, this approach omitted areas of research strength present in the CRIs and other non-TEI research organisations.

In identifying the 'gaps' in NZ's research capability, the subject areas relevant to the priority areas in the NZ research agenda were first identified. NZ's research performance in each of the relevant subject areas was analysed, specifically in regard to the number of publications, citation score and number of research staff with PBRF 'A' rating.

As an external quality check on these findings, data on the strengths and limitations of the NZ science and innovation system obtained from FRENZ was consulted. Expert opinions and advice from the members of the ACCESS4EU: NZ Advisory Board were further sought on the preliminary findings of this report.

Identifying research collaboration opportunities with European researchers involved looking at collaborative research projects that already existed between NZ and the EU Member and Associated States, and shared research priorities. For this task, FRENZ reports on NZ research relevant to the specific themes of the FP7 Cooperation Programme and ACCESS4EU:NZ project were consulted.

Finally, the discussion on collaboration opportunities also needed to include the question of access for European researchers to take part in NZ publicly-funded research programmes, specifically their eligibility to apply. For this task, the findings in D1.1 'New Zealand Schemes Information Materials: Programmes and Rules' were utilised. Nevertheless, while funding arrangements can facilitate research collaboration, commonality of goals and cultural frameworks, and a perception of equality in the partnership, also play a significant role in forging such relationships.

## **Key findings**

### **a) Areas of focus and strength of NZ research**

The table below lists 20 subject fields or disciplines categorising NZ's research outputs over the period 2002-2007, and the highest SIF scores for each subject, related subject or subfield of the respective disciplines. For each subject field, the numbers of Performance-Based Research Funding (PBRF) 'A' rated researchers and the research providers possessing the highest citation scores are also given. In attempting to ascertain NZ's research strengths, it is important to note that some subjects or subject fields may overlap, there may be variants in the subject classifications listed for the different criteria, and some data relevant to the discipline may simply not be adequately covered by the sources accessed. In addition, the PBRF is a Tertiary Education Institute-only exercise, and does not cover private and government researchers.

In looking at the overall performance of the NZ research system, its performance in terms of research output, citation score and number of 'A' rated researchers is high in subjects

relevant to the Biological Industries (Agenda 1), High-Value Manufacturing Services (Agenda 3), Health (Agenda 4) and Hazards and Infrastructure (Agenda 6) appear particularly strong.

#### b) Areas requiring improved performance and growth

As the PBRF assessment affects only the performance of NZ TEIs, an extra category is added to indicate whether CRIs have the capacity to contribute to each of the research agenda. The areas identified as being 'medium' or 'low' in regard to number of publications, citation scores or number of researchers, are considered to potentially benefit from the participation of European researchers.

In terms of citation impact, NZ researchers perform at a high level in all but two subjects - Biological Industries and Environment. NZ's citation scores in these subjects, while above the OECD average, may be expected to increase if the requirements of the research agenda are being met. Finally, the number of researchers focused on each theme is broader than indicated by a count of the top university researchers; for all themes there are one or more aligned CRIs, and for some there are additional independent research agencies working in the relevant subject areas.

Energy and Minerals have been included in the NZ Government's 2012 Economic Growth Agenda, recognising the importance of research in identifying energy and mineral resources, as well as in developing cost-effective, environmentally friendly and sustainable means of energy production and mineral extraction. Through the Energy and Minerals Research Fund, NZ\$3.5 million per annum is available for investment in new programmes starting in 2012.

Crown Research Institute researchers have been identified as the primary providers of Energy and Minerals research. To allow CRIs more discretion in managing and adjusting their research portfolios to take into account changing opportunities, risks and priorities, the NZ Government also now partially funds CRIs to achieve their core purpose. Currently, 52 per cent of previously available funding is transferred through this core funding.

The report identified areas in NZ's research capability that may well benefit from overseas researcher input. However, it is difficult to attribute any research capability 'gaps' to a specific factor, and the relationship between capability indicators are not always clear. In specific priority areas, research productivity and impact would need to improve, while in others there may be an insufficient number of researchers, if NZ is to achieve the Government's 'most important goal' of economic prosperity through a research agenda.

NZ appears to be underrepresented in publications in HVM (Agenda 3), Hazards and Infrastructure (Agenda 6) and Energy and Minerals (Agenda 5) for their apparent importance to New Zealand. These areas received the lowest volume of research output in the time period examined, although they did achieve high citation scores. The relative citation impact of publications in Biological Industries (Agenda 1) and the Environment (Agenda 2) were in contrast relatively modest. Finally, New Zealand could benefit from an increase in the number of PBRF A-rated researchers focusing on Energy and Minerals (Agenda 5), in particular, overseas researcher participation may lead to an increase in research productivity in this area.

## **Outputs**

The final report aimed to map current NZ research capability against NZ's strategic research priorities, and identify gaps in NZ science and innovation knowledge and expertise which European research collaboration may fill. At the policy level, it is expected that the findings in the report act to inform EU-NZ policy dialogue, specifically through the JSTC framework, on NZ's research agenda and opportunities for collaboration. At the researcher level, the findings in the report are expected to lead to greater engagement of EU researchers within the NZ research system, with a view to establishing mutually beneficial collaborative research partnerships.

The D1.2 report formed the content for use on the ACCESS4EU: NZ website (WP2) and training materials to be disseminated to European researchers (WP2). The report also served as a reference point in identifying NZ and European researchers that may be connected through the activities in WP3.

## **WP2: Dissemination of information on access and opportunities to European researchers**

WP2, aiming at contributing to increasing the impact of the project, supported activities related to WP1, WP3 and WP4. In order to widely promote the objectives and activities of the project, to disseminate its results, and to ensure its overall impact, a great number of promotion and dissemination activities were developed all along the project period.

### **i) D2.1: Launch of the Web Portal**

The project website (see <http://www.access4.eu/newzealand/index.php> online) was launched in February 2010 as part of the common web portal of projects funded under the 7th European Framework Programme for Research. The concept, design and technical launch was carried out by DLR, while the menu, design and additional features of the ACCESS4EU:NZ project portal were edited and finalised by the Coordinator. For the duration of the project, it was updated and maintained by the Coordinator, with contribution from the other project beneficiaries, until the final month of the project (M39). Between 2011 and 2013, the NZ section of the common web portal was viewed 1,626 times.

At the early stages of the project, the following features were added to the website, and information for each section was maintained and updated by the Coordinator:

- a) Background information on the ACCESS4EU:NZ project and work packages;
- b) Background information on the project partners;
- c) News items on developments in NZ research and funding policies;
- d) Calendar of project-focused and project-relevant events in NZ and the EU;
- e) Links to relevant analytical reports produced by project beneficiaries;
- f) Updated training and promotional materials specific to the project;
- g) Links to the project newsletter.

### **RTDI database**

The Coordinator took responsibility for maintaining the NZ section of the database, where research programmes and opportunities offered by funding organisations outside the EU are stored. The database is accessible on <http://www.access4.eu/>, and final entries were made by the Coordinator in M39. By 12 April 2013, a total of 870 page views on the common RTDI database were recorded.

In the second reporting period, bilateral calls and mobility funds were added to the database for the first time, despite the lack of allocated time or budget to programmes that were not specifically included in the project under Annex I.

## **Common newsletter**

The Coordinator, on behalf of the Project Team, actively contributed to the common ACCESS4EU e-Newsletter, which was published every 3 months with news and event announcements related to EU-NZ collaboration. This involved considerable amount of research regarding the most recent changes in NZ's research policy landscape, as well as changes in programmes available to European researchers in the transition of MoRST to MSI, and from MSI to the MBIE. The common newsletter had a total of 407 subscribers.

The Project Team was responsible for the publication of the final edition of the e-Newsletter, in December 2012 (M36), which the UC compiled and edited for publication. The link to the newsletter is as follows: <http://newsletter.apre.it/newsletterhandler.ashx?>

## **Linked-In Group**

In addition to the project website, the LinkedIn group for ACCESS4EU:NZ was created by Sigma-Orionis, and was regularly updated. The group was launched in May 2010 with the aim of creating a network of people interested in EU-NZ cooperation opportunities in ICT and to enhance the exchange of information between the two communities, and can be found on <http://www.linkedin.com/groups/Enhancing-EUNew-Zealand-researchers-connections-3882402>.

## **ii) D2.2: Training package for EC multipliers**

The Training package for EC multipliers was finalised in August 2011 and then updated in October 2012 to reflect important changes in the NZ Science and Innovation system and structural changes in the NZ system, with the creation of the new Ministry of Business, Innovation and Employment (MBIE). This 44 page document gives an overview of the NZ research and funding system and how it operates, as well as the rules, conditions and eligibility criteria for accessing NZ's publicly-funded research and innovation programmes. This document was uploaded to the project website and is available for download at the following <http://www.access4.eu/newzealand/685.php>.

The training package was widely promoted through the networks of National Contact Points in Europe, across all relevant areas of Seventh Framework Programme (FP7), as well as

through the European Embassies in New Zealand. This material was also printed, presented and disseminated on the occasion of several events:

- Final EURASIAPAC workshop / 30 Nov. 2011 - Brussels, Belgium / 85 participants
- ACCESS4EU:NZ Promotion Tour on Environment / Sept. 5-8, 2011 / Poland, Austria, Netherlands, Germany
- ACCESS4EU:NZ Promotion Tour on ICT / Nov. 12-16, 2012 / Belgium and Spain
- ACCESS4EU:NZ Promotion Tour on Food and Health / Feb. 14-15, 2013 / UK, Netherlands, Germany, Switzerland

In addition, a number of marketing resources were produced by Sigma Orionis in 2010 (M9):

- Brochure (see [http://www.access4.eu/\\_media/Brochure\\_Web.pdf](http://www.access4.eu/_media/Brochure_Web.pdf) online)
- Poster (see [http://www.access4.eu/\\_media/Poster\\_60x80.pdf](http://www.access4.eu/_media/Poster_60x80.pdf) online)
- Roll-up banner (see [http://www.access4.eu/\\_media/Roll-up\\_banner\\_200x65.pdf](http://www.access4.eu/_media/Roll-up_banner_200x65.pdf) online)
- Video trailer (see <http://youtu.be/jvf2HP36-BQ> online)

This material was prepared in September 2010, in order to be displayed and distributed at the 2010 ICT Event organised in Brussels by the EC on September 27-29, 2010 and it was successively disseminated at project events and other external related events:

- ICT Event 2010 / 27-29 Sept. 2010 - Brussels, Belgium / 5000 participants
- EURASIAPAC workshop / 26 October 2010 - Brussels, Belgium / 61 participants
- 1st Asia-Pacific workshop / 16 Feb. 2011 - Canberra, Australia / 79 participants
- 2nd Asia-Pacific workshop / 18 Feb. 2011 - Wellington, NZ / 73 participants
- 4th Asia-Pacific workshop / 17 March 2011 - Seoul, Korea / 78 participants
- ICT Proposers Day / 19-20 May 2011 - Budapest, Hungary / 1600 participants

In addition, a description of the project was integrated into the common ACCESS4EU brochure 'Opening Horizons' (see

[http://ec.europa.eu/research/iscp/pdf/brochure\\_access\\_4\\_eu.pdf](http://ec.europa.eu/research/iscp/pdf/brochure_access_4_eu.pdf), pages 35-38 online), prepared by the European Commission (DG Research - International Cooperation) in 2010.

iii) D2.3: Training event for EC multipliers

Originally envisaged as a recorded training session to be made available online, it was replaced by the creation and dissemination of a project video trailer, accessible on the project website.

iv) D2.4: Additional training events

The participation in several external events, to present or disseminate information on the project, is considered as part of 'additional training events'.

**WP3: Building EU-NZ researcher connections**

i)D3.1 Researcher workshops

ii)D3.2 Report to input to implementation plan for EC-NZ cooperation

iii)D3.3 Researcher networking events

iv)D3.4 Report on networking events

**Deviation from Annex I**

The original sandpit concept stipulated in Annex I did not fit the A4EU project, as the project could not offer funding opportunities for participating researchers and there were budget constraints for conducting complex sandpit workshops involving professional facilitators and senior experts as stakeholders.

The 'new' approach tried to stick as close as possible to the contents mentioned in the DoW. Therefore the focus from intensive discussions between only a few experts at one hand was changed to the dissemination of comprehensive information to a larger group of interesting



researchers and multipliers on the other hand. For each priority theme a delegation of persons comprising research managers, research leaders, and industry representatives was invited to Europe having huge experiences and a maximum overview of the research and industry strengths and international activities in the respective thematic field. These delegations were invited for a 5-day-promotion tour to Europe to carry out and participate in one or several of the following activities depending on the available opportunities: participate in an international conference, participate in a half-day thematic workshop, visit research organisations and/or labs, have a meeting with the respective representatives at DG research in Brussels.

With this new approach of wider dissemination and wider interaction with key stakeholders in Europe, the project objectives to increase awareness and dissemination, within EU Member States of opportunities for European researchers and research organisations to participate in New Zealand's publicly-funded research and innovation programmes was better achieved than with a small group working in a sandpit model. Furthermore, the new approach with interactive interactions in Europe allowed improving the provision of information on research opportunities available to European researchers in NZ, and the identification of prospective NZ partners with whom European researchers can collaborate, as key to enhancing this collaborative research relationship.

A series of thematically based promotion tours were held in Europe, and arranged by the European Beneficiaries - DLR and Sigma Orionis, with input from the NZ partners. These thematic workshops allowed identification of emerging, trans-disciplinary or convergent research topics of key strategic interest to both NZ and the EU by groups of stakeholders from both a range of disciplines and countries. They reflected the main themes of strategic interest in the STC Agreement:

- 1) Food, Agriculture and Biotechnology;
- 2) ICT,
- 3) Health and
- 4) Environment.

As the Health and Environment topics reflected important interdisciplinary connectivity, they were combined as Food/Health.

For each priority theme, a delegation of persons comprising research managers, research leaders, and industry representatives was invited to Europe having huge experiences and a maximum overview of the research and industry strengths and international activities in the

respective thematic field. These delegations were invited for a 5-day-promotion tour to Europe to carry out and participate in one or several of the following activities depending on the available opportunities:

- participate in an international conference,
- participate in a half-day thematic workshop,
- visit research organisations and/or labs,
- have a meeting with the respective representatives at DG research in Brussels.

The modules of the trip were handled flexible in dependence of available conferences, style, length, interest of invited NZ researchers and other general conditions e.g. the availability of representatives at DG research.

The three pillars for building successful EU-NZ researcher connections in the Access4EU-NZ scheme could be summarized as follows:

#### 1.Information dissemination

- Information on RTDI, environmental research opportunities

#### 2.Interaction and networking

- Establishing possibilities for scientific / social interaction in small groups and where possible in conferences
- Exchange of research framework conditions and interests for collaboration
- Intensifying existing researcher networks, building new networks

#### 3.Exposure

- Look and Touch and Smell of research infrastructure (labs, offices to assess potential for cutting-edge research, exchange of staff)

The details of the tours were as follows:

Tour Conference Institutions/Organisations visited

Food, Agriculture, Biotechnology

05.-13.09.

2011

5 Participants

-2 Research leaders

-2 Research managers

-1 Policy maker

Implementing

Organisation

DLR

Environmental (Bio)Technologies and EU Seventh Framework Programme (FP7) Environment Brokerage Event, Gdansk, Poland

<http://www.envbiotech11.kongresy.com.pl>

1.Polish Ministry of Science and Higher Education

2.Polish Academy of Sciences

3.Foundation for Polish Science

4.Polish Institute of Biochemistry and Biophysics

5.Ministry of Transport, Innovation and Technology, Vienna

6.University of Natural Resources and Applied Life Sciences, Vienna

7.Branch location of bioenergy2020

8.European Center of Renewable Energy Güssing

9.University of Graz, Institute for Internal Combustion Engines, Bioenergy2020

10.National Institute for Public Health and Environment, Netherlands

11.Ministry of Infrastructure and the Environment (VROM), Netherlands

12.Institute of Environmental Engineering and Management at the University of Witten/Herdecke gGmbH, Germany

13.Federal Ministry of Education and Research (BMBF), Germany

14.Alexander von Humboldt Foundation, Germany

15.Deutsche Forschungsgemeinschaft (DFG), Germany

16.Tech University Munich - Water Quality Control Institute

ICT

12.-16.11.

2012

5 Participants

-5 Research leaders

Implementing

Organisation

Sigma Orionis Smart Cities Expo World Congress, Barcelona, Spain

3 days; Exhibition with 140 exhibitors; 319 speakers sessions divided into 11 different topics

<http://www.smartcityexpo.com>

1.Transport and Mobility Leuven, Belgium

2.Living Tomorrow, Belgium

3.EUROCITIES, Belgium

4.iMinds, Belgium

5.New Zealand Mission to the EU

6.Meetings with the European Commission

-DG Research and Innovation

-DG CONNECT: Smart Cities Unit and International Cooperation Unit

-Presentation of Horizon 2020 and European programmes

-Information on Smart Cities priorities and policies and upcoming calls

Food/Health

11.-15.02.

2013

18 Participants

- 8 Research leaders
- 8 Industry represent.
- 2 Policy makers

Implementing

Organisation

DLR There was no international conference during the period of the tour.

1. Institute of Food Research (IFR), UK
2. Leatherhead Food Research Institute, UK
3. Wageningen University and Research, Netherlands
4. German Institute of Food Technologies, Germany
5. ETH Zurich (Swiss Federal Institute of Technology, Switzerland)

### **Summary of outputs of the promotion tours:**

#### **Outputs of the Biotech-Tour**

- 4 Presentations during Gdansk conference: 2x oral, 2 x poster
- 60 people in plenary session, 30 people in scientific / poster session
- 25 bi-lateral meetings during brokerage event out of 118 participants
- 17 organizations visited and NZ research opportunities presented, discussed
- 55 contacts established/intensified by NZ-scientists incl. opportunities, follow-ups

- 30 NZ RTDI Schemes Information Material print outs distributed
- 180 ACCESS4EU:NZ Flyers distributed

Overall:

- Many EU-NZ connections were established/intensified
- Many ideas and starting points for collaboration were intensively discussed
- Policy strategies for international collaboration were intensively discussed
- Wide-spread info-dissemination on NZ RTDI and Access4EU:NZ project
- Intensive exposure of NZ-delegation to research labs/infrastructure

### **Outputs of the ICT-Tour**

- Delegates of very different backgrounds (energy; urban planning; wireless and networks technologies; data collection, management and analysis;) → strong research connections build among them
- Establishment of numerous useful contacts with European researchers and stakeholders interested in EU-NZ ICT cooperation
- Getting a broad view of the wide range of Smart City research underway in Europe and EU funding policy towards researchers outside Europe
- Good format of the week, as it allowed to:
  - Exchange inputs with researchers and get an introduction to the context of Smart cities in EU on the first day
  - Get more details on the research and development status in Europe and Worldwide thanks to the Conference
  - Better understand the funding schemes and policy of the European Commission on the last day
- This tour has provided the stimulus for some really existing future collaboration

### **Outputs of the Food/Health Tour**

-NZ-Delegates got an understanding of the capabilities and areas of work in some of the best universities and research institutes in Europe related to food/health, while European colleagues got insight into the corresponding areas in New Zealand

-The tour highlighted the commonality of many research themes / areas of future focus and also demonstrated the level of interest and respect for what New Zealand has to offer in this regard - reinforcing that many of the building blocks required from which to maintain and build sustainable partnerships are in fact well established and should not be undervalued / overlooked as we also look to new markets. Also highlighted that collaboration with Europe may provide good mutual opportunity for access into China and other Asian / new markets of interest

-The tour also provided a better understanding of the status of the EU regulatory environment and how this was guiding research.

#### **WP4: Monitoring and Feedback**

i)D4.1 and D4.2: Review of EC participation in NZ schemes: Baseline and Final

D4.1 (baseline) and D4.2 (final) presented data in relation to the collaborations directly supported by Vote RS&T, and provided a picture of European participation in NZ's publicly-funded research and innovation programmes from 2006 to 2011.

Data in regard to existing participation of researchers from European Union Member and Associated States was obtained from NZ's three FIAs, namely the RSNZ, FRST (now the MBIE) and the HRC, and contained a list of all participants in NZ research and funding programmes/contracts from 2006 to 2011 for FRST and RSNZ, and only international collaborations for the HRC.

There were significant delays experienced in the collection of relevant data. First, the initial data provided by FRST and HRC covered informal collaboration types rather than formal contracting arrangements. Second, FRST made the provision of requested data conditional on the raw data being accessed by RSNZ alone, for reasons of privacy and confidentiality, and required that no result aggregated below the level of organisation-type be published.

Greater effort was required from the RSNZ than had been anticipated in the delivery of the study. Instead of performing only the supervisory role expected, the RSNZ had to also carry out the analysis and cleaning for FRST (now MBIE) data, given the UC's exclusion in the process by FRST.

## Key findings

### a) Total number of contracts involving European researchers

There were a total of 242 publicly-funded research contracts with international investigators identified in the data provided by the FIAs between 2009 and 2011, and 233 between 2006 and 2008. 36% of the total number contracts in 2006-2008 period was with FP7 nations, and this increased to 41% between 2009 and 2011.

Number of contracts with international relationships directly supported by Vote RS&T, over the 2006-2011 period

Contract w/ linkages	2006	2007	2008	2009	2010	2011	2006	2007	2008	2009	2010	2011
2008	2009											
2011	09–11 cf 06–08											
EU27	24	26	33	34	34	30	83	98	1.18			
FP7 nations	25	26	34	34	34	32	85	100	1.18			
All international	63	75	95	91	85	66	233	242				
1.03												
Proportion int. contracts involving FP7 nations	40%	35%	36%	37%	40%	48%						
36%	41%											

### b) Total number of subcontracts 2006-2011

With the exception of MBIE, the number of international linkages supported through subcontracts from the FIA increased for all NZ-funding agents over 2006-2008 to 2009-2011. The number of linkages involving Seventh Framework Programme (FP7) nations increased in



both absolute and relative terms for all FIA with the exception of the RSNZ, which saw a substantial increase in its support for non-FP7 nations over 2009-2011 causing a decline in share devoted to the EU and Associated nations.

#### Number of subcontracted relationships by FIA and FP7-nation status

2006-2008					2009-2011				
FIA	Non	FP7	Total	% FP7	Non	FP7	Total	% FP7	
FRST/MBIE		40	9	49	18%	29	10	39	26%
HRC	69	7	76	9%	89	30	119	25%	
RSNZ	113	91	204	45%	163	90	253	36%	
Total	222	107	329	33%	281	130	411	32%	

#### c)Collaborating Seventh Framework Programme (FP7) nations

Between 2009 and 2011, a total of 100 new research contracts were funded through Vote RS&T/Vote S&I and which supported researchers from European and Associate nations. From these contracts, subcontracted researchers and research organisations were found to come from 16 of the Seventh Framework Programme (FP7) nations. This represents a marked increase over 2006–2008, which saw 85 contracts supporting researchers from 13 FP7 nations.

Number of contracts supporting FP7-Associated researchers contracted through NZ research projects, by national origin:

Nation	2006-2008	2009-2011		Total (2006-2011)
United Kingdom		42	50	92
Germany	20	20	40	
The Netherlands		3	10	13
France	5	7	12	
Sweden	3	3	6	
Finland	2	3	5	

Ireland	2	3	5	
Italy	2	3	5	
Switzerland		3	2	5
Austria	2	2	4	
Belgium		2	2	4
Spain	0	4	4	
Denmark		2	0	2
Israel	2	0	2	
Norway	0	1	1	
Poland	0	1	1	
Slovakia		0	1	1
Total*	85	100	185	

\*Total is less than the sum of columns as a contract may involve researchers or research organisations from more than one nation.

#### d) International contracts by relevance to STC themes

The majority of New Zealand-funded contracts that supported European researchers, and which were started between 2009 and 2011, continued to be aligned with one of the four FP7 themes that formed the focus of the STC agreement, i.e., 82 of the 100 contracts (82%), compared to 61 of 85 (72%) over the earlier 2006–2008 period. All four themes were supported although to different degrees: the major theme was Environment, followed, in terms of number of contracts aligned, by Health; FAB, and ICT.

Count of contracts grouped by relevance to STC theme:

STC Theme							
Period	Env	Health	FAB	ICT	Other	Total	
2006-2008		26	11	15	9	24	85
2009-2011		37	28	9	8	19	100

Total (2006–2011)	63	39	24	17	43	185
-------------------	----	----	----	----	----	-----

Env: FP7 Theme 6 Environment (including Climate Change) ; FAB: FP7 Theme 2 Food, Agriculture and Fisheries, Biotechnology;

Health: FP7 Theme 1 Health; ICT: FP7 Theme 3 Information and Communications Technologies; Non-aligned: projects outside the four specified themes. Rows sum to more than the total as one contract was aligned with both the Health and FAB themes.

#### e)Infometric evidence of collaboration

Publication co-authorship between New Zealand and researchers from Seventh Framework Programme (FP7) nations was used as a independent measure of changing collaboration strength. Counts of publications sharing authors from New Zealand and any one of the FP7 nations as indexed in the Scopus reference database reveals that FP7-based researchers continue to play an increasing role in New Zealand's research output. Over the past nine years, the proportion of New Zealand publications co-authored with FP7-based researchers grew from 20% to 25% (or an average trend increase in the share of NZ publications of 0.4% per annum).

## Outputs

At the policy level, it is expected that the findings in the baseline and final reports act to inform the EU-NZ policy dialogue, specifically through the JSTC framework, on increasing EU-NZ researcher collaborations, and establishing mutually beneficial collaborative research partnerships.

#### ii)D4.3 Survey of researchers (EU and NZ) on European participation in NZ schemes and D4.4 Report on researcher survey

To identify the perceived benefits of, and barriers to, participation in NZ's publicly-funded research and innovation programmes from the perspective of researchers themselves, an anonymous web-based survey was conducted in the final months of the project (starting in M38) by the UC, with technical assistance from the RSNZ.

The survey questionnaire created using Lime Survey had two versions – one version was designed specifically for NZ researchers, and the other for European researchers. The link to the survey was sent to the NZ and EU researchers via email, with an emphasis placed on the purpose of the survey and the anonymity of respondents. This method was chosen due particularly to the large target group for the NZ section of the survey, which involved 30 respondents per FIA, with a total of 90. On the other hand, the number of EU researchers to be surveyed was contingent on the willingness of the NZ researchers to disclose the names and contact details of their EU research partners in their survey responses.

For the NZ researcher version, the questions were grouped into 5 main categories. With the exception of the first question dealing with the researchers' personal details and research profiles, all other questions elicited either a Yes/No response, or invited the respondents to rank their answers from the lists of options provided.

The first section dealt with the profiles of the NZ respondents, focusing on nationality, number of years of research experience, number of years of collaboration with European researchers, and specific areas of research expertise. A drop-down menu listing the priority areas for NZ research ('NZ research agenda '), as identified in all other ACCESS4EU:NZ reports, was provided, and the respondents were asked to select one. These priority areas were as follows:

- Biological industries;
- Environment;
- High-value manufacturing services;
- Health and society
- Energy and minerals; and
- Hazards and infrastructure

The second section looked at the nature of the research collaboration involving European researchers which the respondents were awarded contracts for, and the respondents were asked to confirm whether European participants in their contracts were supported by financial or other means. If the response was 'Yes', a sub-question was then provided for respondents to provide the name and email address of 1 European researcher they are collaborating with in the FIA-awarded contract.

The third section looked at the expected benefits of EU-NZ research collaboration, and whether such benefits were being achieved. For the expected benefits, 8 possible answers were provided, and respondents were asked to select as many as applicable to them and their organisations with a 'Yes' or 'No' response. An 'Other' option was also provided, and the respondents were then asked to specify what this was.

The fourth section focused on the question of barriers to EU-NZ researcher collaboration. 5 options were provided, and the respondents were invited to identify as many as applicable with a 'Yes' or 'No' response. An 'Other' option was also provided, which the respondents were requested to specify.

The fifth section looked at possible initiatives in encouraging European researcher participation in NZ schemes, with a list of 8 options, including 'Other', to be ranked from the highest (1) to lowest (8), for as many options as preferred by the respondents. An additional question was provided specifically asking respondents to identify any other applicable initiatives not already included in the list.

The final section asked the respondents whether they expected to collaborate with EU researchers in the future, eliciting a 'Yes' or 'No' response.

A random list of 30 NZ researchers who received funding contracts between 2010 and 2011 was requested from each FIA. Research engagement with European researchers was not a criterion for selection.

The RSNZ provided the names and contact details of all Marsden Fund Fast Start or Standard Contracts recipients for the time period specified, and a final random list of 30 recipients was generated using <http://www.random.org>. The HRC provided a link to the section on its website listing all recipients for particular funding periods, and after compiling a list of all researchers awarded contracts between 2010 and 2011, a random list of 30 recipients was generated using the same approach.

There were difficulties experienced in attempting to obtain a random list of NZ researchers from the MBIE for the purposes of the survey. On suggestion by the RSNZ, the UC approached the MBIE's Chief Science Advisor to request the relevant data. However, there was a two week-delay in obtaining a response regarding this request, and when a response was received

The MBIE representative expressed reluctance in taking part in the survey activities for privacy reasons, and due to the commercially sensitive nature of MBIE contracts, only those researchers whose details have been made publicly available on the MBIE website as having received contracts under the Public Good Science Fund (PGSF) were requested to take part.

Out of a possible total of 90, only 20 responses were received from the NZ researchers who were selected to participate in the survey. While a 22% response rate is low, the data gathered from the respondents is helpful in understanding the nature and benefits of, as well as barriers to, EU-NZ collaboration from the perspective of the researchers themselves.

Of the 20 NZ researchers who completed the survey, only 3 (15%) provided the contact details of European researchers that they were collaborating with. However, despite repeated requests for their participation, none of the European researchers identified by NZ researchers completed the survey. For this reason, the report accompanying the survey (D4.4) is only able to focus on the perspectives of NZ researchers regarding European researcher participation in NZ's publicly-funded research schemes, which is a deviation from the requirements of Annex I.

## **Key findings**

Despite the low response rate for the survey, and the lack of European researcher input, the responses reveal a positive picture of the current status of European researcher involvement in NZ programmes. First, in terms of respondent profile, 90% of all respondents have previously collaborated with European researchers, with 32 years as the highest number of collaboration experience for a single respondent. 90% of all respondents also specialise in fields that represent 5 of the 6 themes of NZ's 'research agenda' - Health, High Value Manufacturing Services, Environment, Hazards and Infrastructure and Biological Industries, which would further benefit from international researcher input.

In identifying the benefits or potential benefits of collaborating with European researchers, accessing European scientific or technical knowledge was identified by the majority of the respondents as an important determining factor for research engagement. Financial or cultural gain were not identified as collaboration benefits, suggesting that the preference among those participating in the survey was largely and primarily research-focused. A smaller proportion of respondents also identified reputational benefits as important, as is the ability of such partnerships to address global or transnational challenges, although

these, respectively. On the question of whether or not these benefits are being achieved, slightly under half of the total number of respondents confirmed that they have.

In looking towards the future of EU-NZ research cooperation, 70% of those surveyed confirmed a willingness to work or continue working with European researchers in the future. This, however, is contingent on the barriers to collaboration being overcome, and initiatives being put in place to enhance cooperation. In terms of the former, the question of funding, or lack of it, appears to be the biggest concern for researchers. Geographical distance is also seen as a major obstacle, followed by time constraints, institutional barriers, and a lack of pre-existing links. In regard to putting initiatives in place, again, funding has been highlighted as one measure that would enhance European participation in NZ research programmes. The survey responses also reveal that the current levels of collaboration would significantly benefit from an increase in awareness of eligibility for participation, as well as the simplification of application format and procedures, particularly for overseas researchers who are not familiar with the NZ system.

#### iii) D4.5 and D4.6 Process review of EC participation in NZ schemes: Baseline and Final

The UC, with technical assistance from the RSNZ, conducted a survey with the NZ FIAs to ascertain whether European participation information is being collected in a useful and consistent manner, in order to provide an accurate picture of the current state of EU-NZ research collaboration, and to ensure that information output can usefully contribute to EU-NZ JSTC discussions and other policy considerations. It also aimed to identify areas in the data collection policies and processes of NZ's FIAs which may need revision or improvement for the purposes of the objectives of this review, particularly in regard to monitoring trends in EU participation in NZ programmes and measures associated with enhancing EU-NZ cooperation in research and innovation.

As part of the baseline review of participation of European researchers in NZ's publicly-funded science and innovation programmes (D4.1), data in regard to existing participation of researchers from EU and Associated Member States was formally requested from the following FIAs in 2010: the FRST (now the MBIE), the Health Research Council of New Zealand (HRC) and the Royal Society of New Zealand (RSNZ). The formal data request specifically focused on obtaining information on the following criteria:

- Programme or project type;

- Participating nations;

- Participating organisations or institutions; and
- Funding source.

FRST provided unit records of contracts from 2005 to 2009 involving all collaborators, and this was followed by a second dataset containing unit records of all national and international sub-contracting and co-funding agencies. The RSNZ provided data on all international collaborations named to contracts with the Marsden Fund over the period 2005-2009. The HRC provided data consisting of unit records of all collaborations named on contracts with the HRC as involving international research collaborators.

A preliminary qualitative survey was later conducted with FIA representatives, to obtain specific information regarding their respective data collection processes. The survey questions focused specifically on the FIA's data collection processes in place before 2007 and the period immediately following the introduction of the RS&T Scorecard reporting rule in 2007, which required FIAs to systematically collect information regarding the participation of international researchers in publicly-funded research and innovation programmes.

For the final and overall assessment of the data collection processes on European researcher participation, a second survey was conducted with representatives from each of the FIAs, in order to both support the preliminary assessment made in the baseline review (D4.5), and to obtain an overall picture of the data collection processes to date. Follow-up questions were sent to FIA representatives towards the end of the project in 2013 for further clarification of data provided.

The follow-up reviews looked at the 2010-2012 period and any changes to the FIA's internal data collection processes during this time, specifically to determine whether the ACCESS4EU:NZ project itself has had any impact on the way data regarding EU-NZ research collaboration was gathered and recorded.

The qualitative survey for each of the time periods focused on the following questions:

- What data collection processes were in place in each time period;
- What changes, if any, were introduced to the data collection processes to date and the motivations for such changes;
- Whether data was requested and supplied to JSTC meetings;



-Whether JSTC meetings have had any impact on the data collection processes regarding EU-NZ research collaboration;

-Whether the ACCESS4EU:NZ project's activities have had any impact on data collection processes regarding EU-NZ research collaboration.

Despite numerous requests, it has not been possible to secure the participation of the MBIE as an FIA in the baseline and final surveys. Nevertheless, the response made by FRST to the data requests for the baseline and final review of EC participation in NZ research schemes (D4.1 and D4.2 respectively) will be used in this report to make observations regarding the MBIE's processes of collecting EU-NZ research collaboration data.

## **Key findings**

The baseline and final reviews of the data collection processes of NZ's FIAs have revealed a degree of inconsistency in the approaches undertaken in collecting and reporting data relevant to international research collaboration, although as a whole, such approaches or combination of them have been sufficient in providing the relevant data that is helpful in informing the EU-NZ STC dialogue. While national standards exist for the collection and reporting of data (2007 RS&T Scorecard reporting requirement) as well as the type of data to be collected (MSI 2009 RS&T CV template), it is unknown whether such standards are mandatory or discretionary. However, a flexible approach to applying such standards may not be disadvantageous, given that the FIAs' internal processes produce more complete and comprehensive data than the current RS&T CV template allows.

There is evidence of substantial and continuing collaboration between EU and NZ researchers (as presented in D4.1 and D4.2) in the last decade. Despite the inconsistency in data collection approaches among the FIAs, specifically in regard to choosing between internal procedures and national standards set by what is now known as the MBIE, the varying approaches adopted still do produce a clear and accurate picture of EU-NZ partnership in science and innovation. Nevertheless, there is still a need to develop and establish national standards that would apply to all FIAs and enable the consistent collection, reporting and evaluation of relevant data across programme holders, in order to directly inform policies within the STC framework. In this case, consultation with the FIAs and incorporating FIA-internal methods which have proven successful would be a good first step for the MBIE to take.

## Outputs

Whilst some information already exists on EU-NZ research collaboration, to date no formal analysis of the data collection policies and processes regarding European participation in NZ's publicly-funded schemes has been carried out.

The findings from the surveys of the FIAs' data collection processes would be useful in informing JSTC discussions regarding future EU-NZ research collaboration. In particular, the results will be used to identify areas that need to be changed or improved, to ensure that European researcher participation information is collected and provided in a clear and consistent manner. Improved data collection processes would also ensure that the on-going information needs of JSTC discussions and other policy considerations are met, and enable progress to be measured against these priorities.

iv) D4.7 and D4.8 Feedback on state of European researchers involvement in NZ programmes: Baseline and Final

The UC conducted a study looking at the state of European researcher engagement in NZ programmes from the perspective of the NZ FIAs via a qualitative survey. The surveys aimed to determine the benefits of NZ-EU research collaboration, and to identify the barriers, if any, for European researchers participating in NZ publicly-funded research.

A questionnaire was designed and sent to FIA representatives via email. This method of data collection was chosen due to the small target group and the need to obtain in-depth qualitative data, in order to provide an accurate picture of EU-NZ research collaboration to date from the perspective of NZ programme owners.

The questions were grouped into three parts. Part I dealt with the current state of European researcher participation in NZ's publicly-funded programmes, and looked at two time periods: the baseline study covered the 2006-2009 period, and the final covered 2010-2012. The questions focused on the respondents' awareness in regard to: the success rate of applications received from European researchers; the openness of the FIAs' programmes to European researchers; any trends in proposals received from European researchers during the lifetime of the ACCESS4EU:NZ project, covering the period 2010-2012, to ascertain whether the project had any impact on the number of proposals received during this period.

Part II of the questionnaire focused on the perceived benefits or potential benefits of EU-NZ research collaboration from the FIA respondents' perspective. Part III looked at different ways of enhancing EU-NZ research partnership.

Additional and follow-up questions were sent as part of a second questionnaire, with the questions specifically formulated according to the responses made in the first questionnaire.

One respondent per FIA was invited to complete the survey, and was selected on the basis of his/her management of international collaborative research partnerships within his/her respective organisation. The respondents were contacted via email, and were given four (4) months within which to send their responses. Additional questions were sent to, and received from, the same FIA respondents within one (1) month of receiving the initial responses.

The MBIE declined requests to participate in the qualitative survey, despite having initially agreed to take part. While the lack of MBIE input is indeed a major obstacle in clearly establishing the current status of European researcher participation, the quantitative data provided by FRST/MBIE in related reports, specifically those reviewing the EC participation in NZ research schemes (D4.1 and D4.2) was used to make observations regarding the engagement of European researchers in NZ programmes.

## **Key findings**

The responses made by the HRC and RSNZ offered valuable insights into the status of European researcher involvement in NZ programmes to date. The RSNZ also offered perspectives on bilateral exchange programmes with the EU, in addition to standard contracts. The qualitative survey regarding the performance of applications from researchers from Europe from 2006 to 2012 revealed a positive picture, complementing the findings in the quantitative study conducted as part of the ACCESS4EU:NZ project (D4.1: baseline and D4.2: final).

For standard contracts, the eligibility conditions of the NZ FIAs restricting First Named Investigator roles to NZ organisations has meant that the 'success' of applications from European researchers is determined by the success of the applications lodged by their NZ partners. European researchers are only able to be included in funded programmes as part of a NZ-led research team, or a principal but largely administrative role. However, for bilateral research exchanges administered by the RSNZ on the MBIE's behalf, the

participation of European researchers is guaranteed in partnership with participating European organisations.

From the perspective of the NZ FIAs, existing application and funding processes already serve to encourage European participation in NZ programmes. Despite the dissemination activities of the ACCESS4EU:NZ project promoting research opportunities in NZ to the European research community, to date, there has been no mention of the project in the proposals or applications received. Application initiatives are made by NZ researchers, who select their European research partners and who are aware of the opportunities and funding processes of the NZ FIAs.

## **Outputs**

The findings from the qualitative surveys are useful in informing JSTC discussions regarding the future of EU-NZ research collaboration. Identifying the benefits of and barriers to European researcher participation in NZ programmes from the FIAs' perspective is particularly invaluable, given the key role played by the FIAs in awarding contracts. Their views on the different ways to further develop or enhance this research partnership would also help shape policy strategies in the context of STC priorities.

## **WP5: Project Management**

The UC was solely responsible for the coordination and management aspects of the ACCESS4EU:NZ project. This involved the following tasks:

- i) Collating progress reports and work plans from other beneficiaries (D5.1 and D5.2)
- ii) Producing intermediate management reports for submission to the EC (D5.3)
- iii) Producing the Final Report (this report) for submission to the EC (D5.4)
- iv) Requesting necessary amendments to the GA on behalf of all beneficiaries
- v) Disbursing grant monies to all beneficiaries
- vi) Organising and chairing Project Board meetings
- vii) Documenting dissemination activities
- viii) Requesting feedback from EU and NZ Advisory Groups on project reports

ix)Overseeing the completion of key project tasks as stipulated in the GA

In regard to financial reporting, each project beneficiary was responsible for justifying his/her costs to the EC.

## **Potential Impact:**

### **III.Potential impact and main dissemination activities**

#### **A.Potential impact**

The ACCESS4EU:NZ project was designed to improve understanding of the existing collaborative research relationship between the EU and NZ, where, to date, the main focus has been on the participation of NZ researchers in European activities. It aimed to establish a platform to increase awareness of opportunities available to European researchers in NZ's publicly-funded research programmes, and facilitate access into these programmes. Key to achieving these objectives are improving the provision of information on research opportunities, and identifying prospective NZ partners with whom European researchers can collaborate.

#### **WP1: Mapping of access opportunities**

Through the delivery of research outputs in WP1 (mapping access opportunities and NZ research capability), the ACCESS4EU:NZ project has produced two publicly-accessible documents that clearly set out the eligibility conditions for participating in NZ's publicly-funded research programmes (D1.1 Mapping New Zealand's research and innovation programmes ) and provided a comprehensive account of areas of NZ research in science and innovation which may benefit from overseas research input (D1.2 Mapping New Zealand's research capability).

The information gathered from the opportunity mapping exercise has highlighted, specifically for the FIAs, the importance of clarity in eligibility rules and application procedures for non-NZ applicants. The direct involvement of the RSNZ (Beneficiary 3) in the Project Team has been invaluable in this respect, enabling the project to have an impact on existing FIA processes, such as the clarification made to its Terms of Reference regarding the definition of 'NZ-based' for the purposes of funding eligibility, as a result of ACCESS4EU:NZ information requests. The active participation of MBIE representatives in the project more generally and in the drafting of the final report regarding eligibility rules more specifically, particularly during a time of structural transition for the MBIE, has also provided an opportunity at the policy level to draw attention to the openness of NZ's public research

funding to overseas researchers, and the need for improved clarity in eligibility rules and conditions.

The capability mapping study conducted as part of WP1 has helped identify the areas of strength of NZ research, as well as the 'gaps' which would benefit from overseas researcher input. By matching research capability against the NZ Government's key priority areas in science and innovation, the study provides a comprehensive analysis of the current state of NZ research, which may be useful in informing future EU-NZ dialogue on research collaboration, specifically through the Joint Science and Technology Cooperation framework. The findings of the report would also be of interest to both EU and NZ researchers, NZ research providers and FIAs in terms of strategies for future research collaboration.

In summary, through the delivery of WP1 research outputs, the ACCESS4EU:NZ project has provided the necessary first steps to clarifying the criteria and conditions for European researcher participation in NZ schemes, and to identifying the specific areas of NZ science and innovation where European researcher contribution may be needed.

### **WP3: Building EU-NZ researcher connections**

The direct involvement of the high-level representatives from MBIE in the strategic planning, implementation and follow-up workshop of the promotion tours has been invaluable, enabling the project to have an impact on potential specific collaboration areas in the themes on biotechnology, food, health, and ICT in the next JSTCC, future Horizon2020 research projects as well as on clustering NZ-expertise in potential future engagement in EIT KICs.

### **WP4: Monitoring and feedback**

The data collected and analysed from the monitoring and feedback activities under WP4 serve to provide a complete picture of the state of EU-NZ research collaboration from 2005 to 2012. The data pertained specifically to the overall statistics on European researchers' participation in programmes supported by Vote RS&T, as reported by the FIAs; the review of the FIAs' data collection and reporting processes regarding European researcher participation in NZ schemes; and feedback from researchers (NZ and EU) and FIA representatives on the barriers to and benefits of EU-NZ research collaboration.

Through the statistics gathered in D4.1 and D4.2 (Review of EC participation in NZ schemes: Baseline and Final), the current levels of engagement between EU and NZ researchers are established, thereby making an important contribution to the work of the MBIE and the EC in the context of the STC Agreement. In the first half of the project, such data was requested by the MSI (now MBIE), and was presented by the RSNZ on behalf of the ACCESS4EU:NZ Project Team at the JSTCC meeting (2010) and EURASIAPAC Workshop in Wellington (2011).

The report on the survey conducted with EU and NZ researchers (D4.4 Report on researcher survey) regarding their own professional perspectives on and experiences in EU-NZ research engagement, with a specific focus on the barriers to and benefits of EU-NZ research partnership, is also invaluable in informing the future directions of EU-NZ research collaboration. The STC Agreement ultimately relies on the cooperation and participation of science and innovation experts for it to operate, and by focusing on the perspectives of researchers themselves regarding the collaboration process, the ACCESS4EU:NZ project has provided useful practical insights that would help increase European researcher interest and participation in NZ programmes. These would be particularly helpful for research providers, the FIAs and the MBIE in making strategic decisions for future research and funding opportunities.

The research output of the baseline and final reviews of the FIAs' processes of gathering and reporting data on European researcher participation in NZ's publicly-funded science and innovation programmes (D4.5 & D4.6 Process review of EC participation in NZ schemes: Baseline and Final) would also help highlight for the FIAs the direct contribution they make to the MBIE and the EC in the context of the STC Agreement through the provision of complete and accurate information. The process reviews, based on the information provided by the FIAs through a qualitative survey, determine whether current data gathering and reporting processes enable levels of international collaboration to be accurately identified and measured against policy priorities.

The results from the qualitative survey on the FIAs' perspectives on the state of European researcher involvement in NZ's publicly-funded research programmes from 2006 to 2012 (D4.7 and D4.8 Feedback on the state of EU researcher involvement in NZ programmes: Baseline and Final) would also help contribute to strategic measures to be adopted by the MBIE, research providers and the FIAs themselves in removing barriers to collaboration and promoting further research engagement with European researchers and research institutions. The RSNZ involvement in the design of the baseline and final surveys has ensured that the right information was collected in a way that is meaningful and easily translated into policy action.



## **B. Main dissemination activities**

### **WP2. Dissemination of information on access opportunities**

The ACCESS4EU:NZ project website was launched in February 2010 as part of the ACCESS4EU common web portal (D2.1 Launch of web portal). The open access website acted as the portal for information related to the project and activities involving EU-NZ research linkages, and was regularly maintained to provide up-to-date information in regard to project development, developments regarding the NZ research system and Research and Development (R&D) cooperation with the EU, science and innovation-related events taking place in NZ, links to relevant websites and to the common newsletter. All promotional materials produced as part of WP2, and all project reports for public access were also accessible on the web portal.

All information provided on the website allowed the EC, MBIE, research providers, FIAs and researchers access to all public ACCESS4EU:NZ resources, and therefore a comprehensive understanding of the project background and objectives. As the website was shared between eleven (11) countries taking part in the ACCESS4EU project, the dissemination of information promoting EU-NZ science collaboration also extended to the audiences targeted by the other participating countries. Between 2011 and 2013, the NZ section of the common web portal received a total of 1,626 visits.

Through the ACCESS4EU:NZ website, European researchers were able to access helpful information about the Framework Programme and EU-New Zealand research collaboration. Open calls for NZ research projects and programmes open to European researchers were also accessible on the RTDI database on the common web portal. The database was maintained and updated on a regular basis, and made the eligibility rules and application process as clear as possible to the European audience. The links to the actual application forms and guidelines were also provided on the database, and the contact details of the representatives of the FIAs responsible for the projects were clearly set out. By April 2013, a total of 870 page views on the common RTDI database were recorded.

In addition to the project website, a LinkedIn group for ACCESS4EU:NZ was created by the WP2 leader. It created a network of researchers interested in EU-NZ cooperation opportunities in ICT, and enhanced the exchange of information between the two research communities.

The training package for EC multipliers (D2.2) gives an overview of the NZ research and funding system and how it operates, as well as the rules, conditions and eligibility criteria for accessing NZ's publicly-funded research and innovation programmes. It is accessible on the project website and is available for download. It was widely promoted through the networks of National Contact Points (NCPs) in Europe, across all relevant areas of Seventh Framework Programme (FP7), as well as through the European Embassies in New Zealand. This material was also printed, presented and disseminated at a number of project-related events in NZ and in Europe. It is completed by a project video trailer, which is also available on the common web portal.

### **WP3. Building EU-NZ researcher connections**

Through the promotional tours held in fulfilment of WP3 obligations, the ACCESS4EU:NZ project reached a wide audience of European researchers with an interest in engaging with NZ researchers. The tours and workshops have allowed the discussion of policy strategies for further enhancing collaboration, identification of emerging, trans-disciplinary or convergent research topics of key strategic interest to both NZ and the EU, and also helped disseminate information on the NZ RTDI system and the ACCESS4EU:NZ project more specifically.

### **WP5. Project management**

The membership of a Swiss and Belgian NCPs in the ACCESS4EU:NZ Advisory Board, and their involvement in the completion of project reports through expert feedback, have not only enhanced the quality of the project's research outputs, but also enabled the dissemination of the project and its achievements among the wider network of European NCPs associated with the Framework Programme.

### **List of Websites:**

<http://www.access4.eu/newzealand/index.php>