

# Proposal Evaluation Form

	<b>Research Executive Agency</b> 7th Framework Programme for Research	<b>EVALUATION SUMMARY REPORT</b>
---	--	--

**Call :** FP7-PEOPLE-2011-IOF  
**Funding Scheme :** MC-IOF International Outgoing Fellowships (IOF)  
**Proposal number :** 300077  
**Proposal acronym :** RAPIDEVO  
**Duration (month) :** 36  
**Proposal title :** Rapid evolutionary responses to climate change in natural populations: Integrating molecular genetics, climate predictions and demography into an eco-evolutionary modelling framework

N.	Proposer name	Country	Type	Total cost (€)	%	Grant requested (€)	%
1	POLITECNICO DI MILANO	IT					
2	The Regents of the University of California, Santa Cruz	US					
<b>Total :</b>							

## Abstract :

Intensification and increased frequency of weather extremes is emerging as one of the most dramatic aspects of climate change. Thus, the study of ecological implications of global-scale changes is expanding from a focus on trends (e.g., mean temperatures) to broader investigations including the effects of extreme events and associated catastrophic disturbances (e.g., floods, fires, droughts). However, investigations exploring adaptations of individuals and species to altered patterns of extreme events are still rare and overarching studies are greatly needed. Crucially, rapid evolutionary and adaptive processes are highly relevant for understanding and predicting species responses to climate change. I propose to investigate the selective consequences of periodic catastrophic disturbances on genetic diversity and life-history traits, using marble trout (*Salmo marmoratus*) populations living in Slovenian streams as a model system. In this system, flash floods and debris flows causing massive fish mortalities are increasing in frequency and intensity.

I will use an innovative multidisciplinary and interdisciplinary approach, combining (i) molecular genetics, (ii) demographic analysis and statistical characterization of temporal and spatial patterns of flood events, and (iii) life-history, demographic and eco-evolutionary modelling, to understand and predict the selective consequences of the altered pattern of catastrophic disturbances on the genetic composition and life-history traits of marble trout.

Bringing together genetic, climatic, life-history and demographic aspects in this model system will allow the development of an overarching and general modelling and conservation framework for rapid evolutionary and adaptive processes, and will establish a reference of how to explore the consequences of climate change-induced intensification of weather extremes on natural populations.

## Marie Curie International Outgoing Fellowships (IOF)

### SCORING

Scores must be in the range 0-5. Decimal marks may be given.

Interpretation of the score:

0- The proposal fails to address the criterion under examination or cannot be judged due to missing or incomplete information.

1- Poor. The criterion is addressed in an inadequate manner, or there are serious inherent weaknesses.

2- Fair. While the proposal broadly addresses the criterion, there are significant weaknesses.

3- Good. The proposal addresses the criterion well, although improvements would be necessary.

4- Very good. The proposal addresses the criterion very well, although certain improvements are still possible.

5- Excellent. The proposal successfully addresses all relevant aspects of the criterion in question. Any shortcomings are minor.

### Criterion 1. S&T QUALITY (award)

(Threshold 3.00/5.00)

Mark: 4.70

Weight: 0.25

- Strengths of the proposal:
- +The objectives are of good quality and important.
- +The proposed research is multidisciplinary, integrating genetics and modeling of the prediction of future catastrophes.
- +The proposed research is original.
- +The research proposed is timely because catastrophic events have been increasing in the World.
- +The supervisors are all very good.
- Weaknesses of the proposal:
- No major weaknesses were found.

Issues to be addressed when assigning an overall mark for this criterion:

- Research/technological quality, including any interdisciplinary and multidisciplinary aspects of the proposal.
- Appropriateness of Research methodology and approach
- Originality and innovative nature of the project, and relationship to the 'state of the art' of research in the field
- Timeliness and relevance of the project
- Host research expertise in the field (outgoing and return host)
- Quality of the group/ supervisors (outgoing and return host)

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (in bullet point structure):
  - Weaknesses of the proposal (in bullet point structure):
  - Overall comments:
- (reflecting the relative importance of the strengths and weaknesses above mentioned)  
( copy the text above in the comment box )

**Criterion 2. TRAINING (award) (Threshold 3.00/5.00)**

Mark: 4.80  
Weight: 0.15

- Strengths of the proposal:
- +The clarity and quality of the research training objectives are very good. They are documented sufficiently in the research proposal.
- +Complementary skills are provided sufficiently and they are convincing.
- +Both hosts show a very high level of expertise in training and mentoring.
- Weaknesses of the proposal:
- No major weaknesses were found.

Issues to be addressed when assigning an overall mark for this criterion:

- Clarity and quality of the research training objectives for the researcher
- Relevance and quality of additional research training as well as transferable skills offered\*
- Host expertise in training experienced researchers in the field and capacity to provide mentoring/tutoring (outgoing and return host)\*

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (in bullet point structure):
  - Weaknesses of the proposal (in bullet point structure):
  - Overall comments:
- (reflecting the relative importance of the strengths and weaknesses above mentioned)  
( copy the text above in the comment box )

**Criterion 3. RESEARCHER (award) (Threshold 4.00/5.00)**

Mark: 4.70  
Weight: 0.25

- Strengths of the proposal:
- +The applicant has documented extensive scientific academic achievements in terms of published work.
- +The applicant is the main contributor of his published work in large majority of his papers. This is an indication of independent thinking qualities.
- +The applicant's profile is fully in line with the project.
- +There is a very good chance that the applicant will acquire new knowledge and publish high impact papers.
- +The project has a very good potential to help the applicant to reach a position of professional maturity, particularly in terms of learning advanced genomics and statistics.
- Weaknesses of the proposal:
- Reaching a position of professional maturity should be articulated better with concrete future plans.

Issues to be addressed when assigning an overall mark for this criterion:

- Research experience
- Research results including patents, publications, teaching etc., taking into account the level of experience
- Independent thinking and leadership qualities
- Match between the fellow's profile and project
- Potential for reaching a position of professional maturity\*
- Potential to acquire new knowledge

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (in bullet point structure):
- Weaknesses of the proposal (in bullet point structure):
- Overall comments:  
(reflecting the relative importance of the strengths and weaknesses above mentioned)  
( copy the text above in the comment box )

#### Criterion 4. IMPLEMENTATION (selection)

(Threshold 0.00/5.00)

Mark: 4.70

Weight: 0.15

- Strengths of the proposal:

- +Quality of infrastructure and international collaborations of hosts are very good.
- +No problems are foreseen in terms of practical arrangements for the implementation and management of research project
- +The project is feasible thanks to the data set acquired during the conservation project of marble trout.
- +The work plan chart is clear and it is sufficiently detailed.
- +Both institutions show commitment to support the applicant.

- Weaknesses of the proposal:

- No major weaknesses were found.

Issues to be addressed when assigning an overall mark for this criterion:

- Quality of infrastructure / facilities and International collaborations of host (outgoing and return host)
- Practical arrangements for the implementation and management of the research project (outgoing and return host)\*
- Feasibility and credibility of the project, including work plan
- Practical and administrative arrangements, and support for the hosting of the fellow (outgoing and return host)\*

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (in bullet point structure):
- Weaknesses of the proposal (in bullet point structure):
- Overall comments:  
(reflecting the relative importance of the strengths and weaknesses above mentioned)  
( copy the text above in the comment box )

Note : No threshold, Weighting: 15% split where appropriate between the 3rd country institution and the European host

#### Criterion 5. IMPACT (award)

(Threshold 3.50/5.00)

Mark: 4.50

Weight: 0.20

- Strengths of the proposal:

- +There is a very good potential for acquiring competencies during the fellowship.
- +The project is expected to make a significant contribution to European excellence and competitiveness.
- +The project is expected to contribute to the career development of the applicant.

- Weaknesses of the proposal:

- Concrete plans for long-term collaborations are not completely clear.

Issues to be addressed when assigning an overall mark for this criterion:

- Potential of acquiring competencies during the fellowship to improve the prospects of reaching and/or reinforcing a position of professional maturity, diversity and independence, in particular through exposure to transferable skills training\*

- Contribution to career development or re-establishment where relevant\*
- Potential for creating long term collaborations and mutually beneficial co-operation between Europe and the other third country
- Contribution to European excellence and European competitiveness
- Benefit of the mobility to the European Research Area
- Impact of the proposed outreach activities\*

Please use the following structure in your comments to this criterion:

- Strengths of the proposal (in bullet point structure):
- Weaknesses of the proposal (in bullet point structure):
- Overall comments:  
(reflecting the relative importance of the strengths and weaknesses above mentioned)  
( copy the text above in the comment box )

**\*Sub-criteria to be evaluated in the light of the principles of the 'European Charter for Researchers' and the 'Code of Conduct for the Recruitment of Researchers'.**

**RECOMMENDATIONS FOR NEGOTIATION AND/OR INDICATORS TO MONITOR PROGRESS OF PROJECT:**

*Though the outreach activities are quite good, there is room for improvement, such as including benchmarking and the way to measure the outreach results.*

<b>TOTAL SCORE</b>	<b>(Threshold 70.00/100.00)</b>
Total:	93.50

**Ethical Issues**

**Does this proposal raise ethical issues?**

No