

## **Dana Meadows Scholar Proposal**

On behalf of Diversity committee and Vice president Membership

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### **Background**

The International System Dynamics Society currently utilizes the Dana Meadows Fund to support the annual Dana Meadows Award, which recognizes the best paper presented by a student at the Society's annual conference. The award consists of a \$2,500 prize, with additional funding provided for conference registration and travel expenses (up to \$1,500) for the winner, and a \$500 cash prize for honorable mentions. The total annual cost of the award is approximately \$5,000.

In recent years, the fund has accumulated a surplus, providing an opportunity to expand its impact. The fund currently allows for additional spending of \$10,000 to \$15,000 per year. The Executive Committee of the System Dynamics Society has requested that the Diversity Committee/VP membership proposes ways to utilize these additional funds, specifically in ways that align with Donella Meadows' legacy of promoting education and diversity in System Dynamics.

### **Considered Alternatives**

Alternative	Pros	Cons
<b>Increase Conference Scholarships</b>	<ul style="list-style-type: none"><li>-Greater accessibility to conference for students or low-income applicants</li><li>-Utilizes existing administrative processes</li></ul>	<ul style="list-style-type: none"><li>-One-off conference attendance may not be sufficient to support sustained SD practice or study</li><li>Funneling funds back to the society</li></ul>
<b>Social Impact Loans</b>	<ul style="list-style-type: none"><li>-Loan program allows</li></ul>	<ul style="list-style-type: none"><li>-Administratively burdensome</li></ul>

	<p>reinvestment of fund to extend impact</p> <ul style="list-style-type: none"> <li>-Supports diversity/inclusion aims</li> </ul>	<p>option (awarding and monitoring potentially high-risk)</p> <ul style="list-style-type: none"> <li>-Outside core business of professional association</li> </ul>
<b>Translation Fund</b>	<ul style="list-style-type: none"> <li>- Potential revenue source</li> <li>- Broad outreach supports diversity/inclusion aims</li> </ul>	<ul style="list-style-type: none"> <li>-Administratively burdensome (coordination with chapters, royalties of local publishers and authors)</li> <li>- Profit margin on publications is low, effort is high</li> <li>-Outside core business of professional association</li> </ul>
<b>Scholar Fund</b>	<ul style="list-style-type: none"> <li>- Embeds a student in SD community which expands career possibilities</li> <li>- Enables potentially life-changing opportunity</li> <li>- Utilizes existing administrative processes</li> </ul>	<ul style="list-style-type: none"> <li>- Administration for selection process</li> <li>- Narrower outreach</li> <li>-Risk of miss allocation</li> <li>- Requires investment in living costs for selected student</li> </ul>

**Dana Meadows conference scholarships made available to students** to cover conference registration and travel expenses, similar to the current practice, but with an increased budget, allowing the Society to award an additional 10 to 15 scholarships annually.

**Dana Meadows Social impact loans**, which could provide seed money for applicants with entrepreneurial ideas related to SD/ST. This has the potential to multiply the impact of the funds because lent money may get returned, and then could be reinvested as loans in other SD/ST endeavors.

**Dana Meadows Translation Fund.** To translate SD works into other languages (than English) could expand our reach among non-English speaking countries. This could be carried out using AI to make the translations, and relying on regional chapters to participate in the copyediting of the translations, and the publishing process. This could also lead to a potential revenue source for the Society, assuming that the Society can offer these books as products on our website

(digital format or physical products) and/or have partnership agreements with publishers in the relevant countries since they are more familiar with local markets.

### **Evaluation of alternatives**

While these approaches have potential to reach higher numbers of individuals, they have disadvantages as well.

The conference scholarship option has the advantage of utilizing existing administrative processes and multiple people. However, supporting conference attendance assumes that the applicant has already gained access to SD knowledge and training to generate their initial interest. This is somewhat low-leverage regarding diversity and inclusion aims. There is also an inherent risk of impact being short-term and not providing the sustained support needed to make a lasting difference in an individual's career or the broader System Dynamics community.

The impact loans and translation fund options would fit diversity and inclusion aims. It has the disadvantage of requiring new administrative processes, calling for significant volunteer time investment to be initiated. Translation would however require a great deal of coordination with regional chapters, raising ethical and legal questions about royalties for authors and regional publishers. Social impact loans would require financial administration and oversight to reduce risks of defaulted payments and may require specialized expertise for tax accounting purposes across multiple countries.

These last two options may be construed as moving away from the core business of the Society creating additional tasks that will end up costing more than they return, when one considers the opportunity cost of time spent.

### **Proposal**

**Establish the Dana Meadows Scholar Fund.** This new initiative would provide \$30,000 in funds, awarded every two years, to a student from a low-income country to pursue in-person advanced studies in System Dynamics that lead to a graduate degree. This amount is adequate to finance participation in recognized System Dynamics educational programs, for example in

Europe, and can help support the ability to attend graduate studies in other regions. The scholarship could be used for tuition fees or other study related costs. Travel, accommodation, and basic living expenses, would in principle be covered by the student. The amount assumes lowest-cost established programs are chosen, for example the European Master in System Dynamics (32,000 - 39,000 usd for two years) or the University of Bergen System Dynamics Masters Program( 37,000 usd for two years) or that additional funds are acquired. For comparison, at the time of writing, MIT tuition is 31,000 usd per term or around 62,000 usd per year, Dartmouth 24,000 usd per term or 48,000 usd per year. Any graduate program could be considered as long as it contains a rigorous system dynamics focussed course base and features an SD-focussed thesis. The student would also get ISDC registration throughout the funding period.

This is the preferred alternative based on the following reasoning:

- **Inclusivity:** Broader distribution of the funds achieved through conference scholarships or social impact loans will typically require prior knowledge and experience in System Dynamics. The scholarship option would be open to students with diverse educational backgrounds, providing an opportunity for those who may not have had previous exposure to the field.
- **Long-Term Impact:** By supporting a student's entire education in System Dynamics, the scholarship would provide a life-changing opportunity, equipping the recipient with the skills and knowledge needed to excel in the field. This not only benefits the individual but also contributes to the global System Dynamics community by expanding its diversity and reach.
- **Administrative Efficiency:** Awarding the scholarship every two years reduces the administrative burden on the Society, allowing for a more focused and impactful use of resources.

**Practical consequences:**

The society establishes a Donna Meadows award, initially set at \$30,000. The award is drawn from the Dana Meadows Restricted Fund and is offered as often as once every two years based on the fund guidelines to a student from a developing country to study System Dynamics at a recognized institution. This initiative honors Donella Meadows' legacy by fostering education and diversity within the field, while providing sustained support for the next generation of System Dynamics scholars.

- **Eligibility & Application Requirements**

1. Bachelors, with a minimum GPA Level
2. A reference of a member of the International System Dynamics Society.
3. Motivation letter, including description of a global or societal challenge that can be approached through system dynamics, need for the scholarship, motivation and career goals for pursuing the program.
4. Eligibility would be contingent on acceptance into a program. The program and the students proposed course of study will be assessed along a continuum of system dynamics content and weighted accordingly.

- **Selection process:**

The VP Membership will constitute and chair a selection committee that should include at least a member active in Society diversity work, a post-secondary student or recent graduate, the VP Finance, and a member of the Dana Meadows Award Committee.

Deadline in January, selection in March

- a. For each application part a weight and scoring system is assigned and adhered to by all committee members. For EA1 25%, for EA2 25% and for EA3 50%. The scoring system should focus on:
  - The quality of the candidate
  - The contribution to the diversity of the pool of SD experts
  - Motivation

- Spread of knowledge (Prioritize those who want to be professors or practitioners)
- Prioritize candidates who want to further develop SD in underrepresented areas.

- **Requirements after admission**

Develop a Student Individual Development plan, and report every semester, including:

- a. Satisfactory study progress - minimum GPA suggested
- b. Costs/Budget and availability of funds to cover living expenses

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