

Conditions and Potentials for Education for Sustainable Development in Primary Schools in North-East Madagascar

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Introduction

Madagascar is known as “biodiversity hotspot” (i.e., Ganzhorn et al. 2001) but has a huge burden on the resting primary forest (Vieilledent et al. 2018). For a sustainable development that allows biodiversity protection while meeting the demands of present and future generations, education plays a key role (de Haan 2010). Thus, recent development plans in Madagascar request a better integration of regionally relevant Education for Sustainable Development (ESD) in primary education (Rabarison et al. 2015).

General objective

The objective is to support the further development of school curricula and teacher trainings in the SAVA-region, North-East Madagascar, towards a regionally adapted ESD. We aim at identifying leverage points by providing information about:

- I. Prerequisites of school curricula for ESD
- II. Prerequisites of teachers for teaching ESD through locally relevant topics
- III. Schooling conditions in primary education.



What are the conditions for Education for Sustainable Development in the primary schools of the SAVA region?

I. Prerequisites of school curricula





II. Teacher knowledge

III. Schooling conditions in primary education

I. The school curricula and the Sustainable Development Goals (SDG)

Analysed curricula:

- *Connaissances usuelles*
- *Géographie*
- *Français*
- *Éducation civique*



Most of the learning objectives in the school curricula refer to SDG 3, 6, 12 and 15

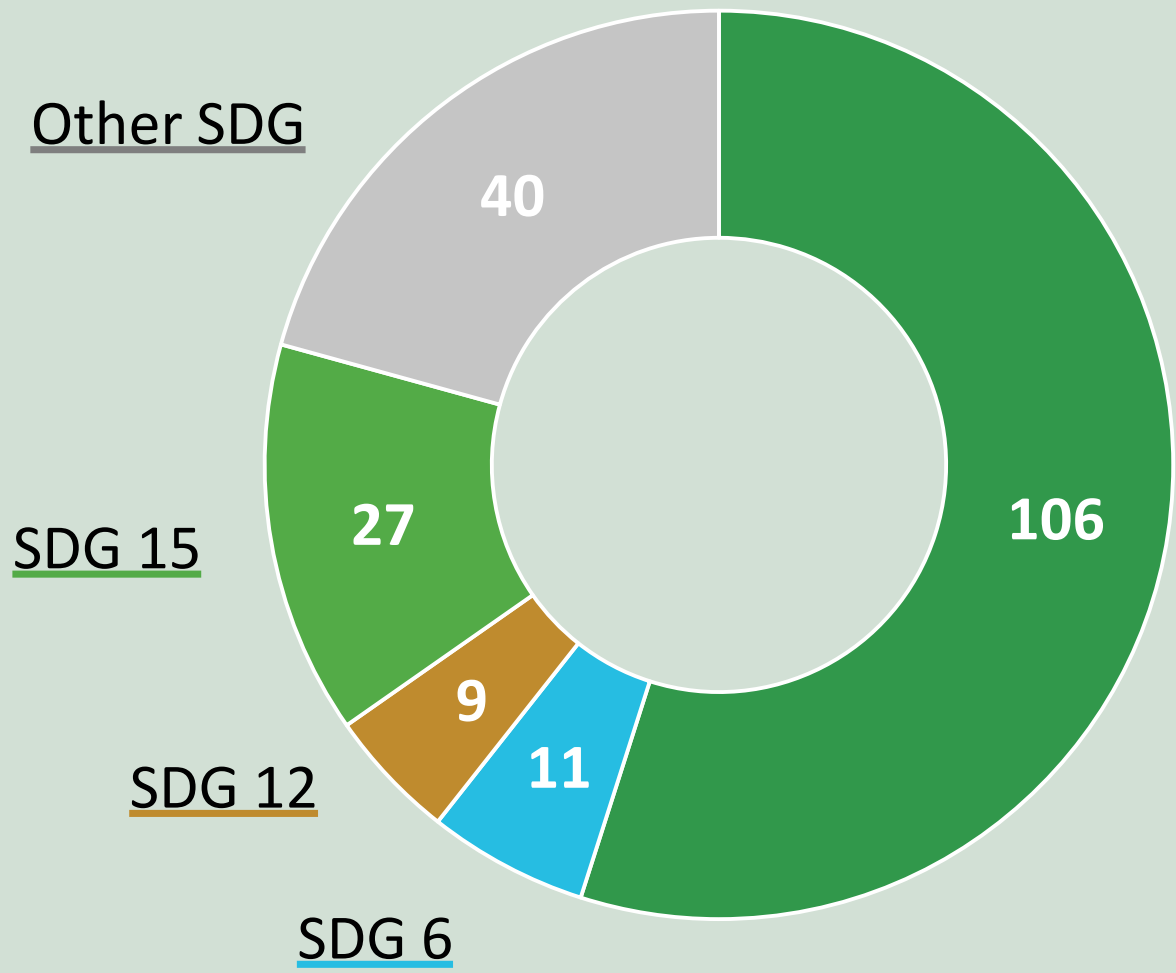


Fig.1: Absolute number of learning objectives in the analysed school curricula.

III. The schooling conditions vary between public and private primary schools

Questionnaire about the school structure with directors of 128 schools
n (public)=56; n (private)= 59

Compared to public schools, private schools have

- less financial support (NGOs, economic operators, private donors)
- more deficiency of adequate school premises ($p < .01$)
- more school lessons per day ($p < .01$)
- more ecological excursions ($p < .001$) and visits of vanilla plots ($p < .05$)
- higher school success rate ($p < .001$)

II. Teacher knowledge

Study domains:

- “Good Health and well-being” (SDG 3 and 6)
- “Protection and sustainable use of the biodiversity and agronomic productivity” (SDG 12 and 15)

Estimations of courses of action regarding:

- Effectiveness and
- Possibility of implementation

Procedure:




- I. Expert study (Delphi) (N=34)
 - Questionnaire with locally relevant courses of action
 - Defining a reference for the teacher responses
- II. Teacher study (N=302)
 - Comparison of the responses with those of the experts

Table 1: The experts rather estimated the courses of action as more effective and easier to implement compared to the teachers

	Estimation of the courses of action regarding...		
	...effectiveness for good health and well-being	...possibility of implementation in rural life	...possibility of implementation in urban life
Body hygiene	*	n.s.	n.s.
Food hygiene and healthy diet	**	**	n.s.
Prevention of (heavy) illness	*	**	n.s.
Risk avoidance	n.s.	***	*

	Estimation of the courses of action regarding...		
	...effectiveness for protection and sustainable use of the biodiversity	...effectiveness for agronomic productivity	...possibility of implementation in rural life
Management of vanilla plantations	***	*	*
Management of cultivated and non-cultivated plots other than vanilla	***	*	n.s.
Soil management	***	*	n.s.

n.s.: no significant difference
* ($p < .05$): significant difference
** ($p < .01$): strong significant difference
*** ($p < .001$): very strong significant difference
The presented significant differences always indicate that the experts’ estimations exceeded those of the teachers.



Literature:
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