



StEP Comments Ghana E-Waste Bill

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Part I & II

Solving the E-waste Problem (StEP) Initiative
c/o United Nations University
Institute for Sustainability and Peace (ISP)
Operating Unit SCYCLE
Hermann-Ehlers-Str. 10
53113 Bonn, Germany
Tel.: +49-228-815-0213
Fax: +49-228-815-0299
<http://www.step-initiative.org>

Contact Person:
Ruediger Kuehr,
Executive Secretary StEP Initiative
kuehr@unu.edu

Disclaimer

This paper was developed within a Sub-Group of StEP's Task Force Policy with representatives from business/industry, international organizations, academia & research. It consists of two parts – Part I “*General Comments*” and Part II “*Specific Comments*”.

PART I – General comments

I. Preamble

(1) StEP envisions a future in which societies have reduced to a sustainable level the e-waste-related burden on the eco-system that results from the design, production, use and disposal of electrical and electronic equipment. These societies make prudent use of lifetime extension strategies in which products and components – and the resources contained in them – become raw material for new products.

(2) StEP, acting as a network of actors sets forth clear and achievable objectives that are broad in scope but aim to solve concrete issues. Its activities are performed along the following five principals:

- StEP's work is founded on scientific assessments and incorporates a comprehensive view of the social, environmental and economic aspects of e-waste.
- StEP conducts research on the entire life-cycle of electronic and electrical equipment and their corresponding global supply, process and material flows.
- StEP's research and pilot projects are meant to contribute to the solution of e-waste problems.
- StEP condemns all illegal activities related to e-waste including illegal shipments and reuse/ recycling practices that are harmful to the environment and human health.
- StEP seeks to foster safe and eco/energy-efficient reuse and recycling practices around the globe in a socially responsible manner.

(3) Many StEP members have good first-hand experience with the practical application of the current E-waste Legislations around the world. Therefore StEP welcomes the initiative to legislate an E-Waste Management Strategy Policy for Ghana.

(4) This document examines December 2011 draft bill with reference to among others the findings of StEP work and the individual experience of StEP members and other background research conducted.

(5) StEP provides its comments through a sub-group established under StEP's Task Force "Policy" involving representatives of the StEP members Basel Convention Coordination Centre for Africa, Cisco, Dell, Swiss Federal Laboratory for Materials Testing and Research (EMPA), Ericsson, German Society for International Cooperation (GIZ), Hewlett Packard, Philips, the Secretariat of the Basel Convention (SBC), United Nations University (UNU) with the support of other individuals.

(6) This document takes a holistic view on the proposals made from a science-based, but nevertheless applied perspective. It contains further suggestions to enhance the environmental effectiveness, social implication and economic efficiency and illustrates problems of policy coherence that may arise out of the implementation of proposals made and first recommendations to overcome such.

II. Objectives and definitions

It is suggested to add a preamble to the two parts – (i) on hazardous waste and transboundary movements and (ii) on e-waste - of the bill in order to clearly define its respective aims and scopes.

Typically this would include the following areas:

- Protection of humans and the environment from the unsound management of e-waste
- Governing the import of used EEE
- Governing the return, the take-back and the disposal/treatment of WEEE

The bill would benefit by:

- Referencing the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (including Ban Amendment, which Ghana ratified) and the Bamako Convention on the Ban on the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa.
- Inclusion of a list of wastes that are defined as hazardous wastes in the Basel and Bamako Conventions or which appear in the Republic's additional list of defined hazardous wastes.

The bill only refers to electronic equipment and waste, although in the SECOND SCHEDULE, (Section 28 (1), also electrical equipment is mentioned.

It is recommended to always use the term "***electrical and electronic equipment (EEE)***" "***waste electrical and electronic equipment (e-waste or WEEE)***" with the following definitions:

- "Electrical and electronic equipment" means equipment powered by electricity/battery/solar power. For a detailed list of electrical and electronic equipment, see the SECOND SCHEDULE, (Section 28 (1))
- "E-waste" means Waste Electrical and Electronic Equipment (WEEE), including end-of-life (EoL) or discarded electric or electronic equipment powered by electricity/battery/solar power; which is no longer suitable for use by the owner, and which is intended for dismantling and recovery of spare parts or is destined for material recovery and recycling or final disposal. It also includes off-specification or new electrical electronic equipment (EEE) which has been sent for material recovery and recycling, or final disposal.
- Furthermore, the SECOND SCHEDULE, (Section 28 (1)), lists electric and electronic equipment according to the "ANNEX IA: Categories of electrical and electronic equipment covered by this Directive including List of products which shall be taken into account for the purpose of this Directive" of the European WEEE Directive, with the exception of small household appliances. It is though recommended to also include small household appliances according to ANNEX IA in the SECOND SCHEDULE since they form an important part of the Ghanaian e-waste stream.

It is also suggested to clarify in this section that Extended Producer Responsibility (EPR) is a policy concept aimed at extending producers responsibility for their products to the post-consumer stage of their products' life cycle

Also with respect to the EPR Principle, the producer should be defined as the local manufacturer or importer of new or used EEE.

III. Responsibilities

Part two of the Hazardous and Electronic Waste Control and Management Bill, 2011 foresees the implementation of an electronic waste levy. This section of the bill has the overall objective to implement a waste management system for electronic waste (e-waste). The implementation of the Electronic Waste Levy and Electronic Waste Recycling Fund implies that all operational responsibilities for e-waste management and recycling will become a government responsibility rather than a producer responsibility. StEP believes that the extended producer responsibility (EPR) principle and the polluter-pays principle should form the basis of any e-waste legislation. In order to maximize producer involvement and incentivize the efficient operation of such an EPR system, producers should be given the possibility to manage their own waste streams rather than let this be managed through a state managed fund. This section provides a high level outline of how responsibilities under such a system should be distributed.

Responsibilities of the authorities

The Ghanaian Environmental Protection Agency ('the Agency') has an important role to play in enabling the smooth operation of the overall system, ensuring treatment centres are properly registered, accredited and audited based on recognized standards; and all obligated parties are clearly defined and registered within the National EEE Registry. Additionally, the Agency is the Basel Competent Authority.

The Ghanaian Authorities play a critical enabling role in lifting market barriers such as access to global markets and enforcing a level playing field for all stakeholders via appropriate legal instruments. In applying an EPR approach it is essential to clearly identify the roles and responsibilities of all electric and electronic equipment (EEE) stakeholders such as manufacturers, importers, importers of used equipment, distributors and recyclers within an e-waste collection system/programme.

Responsibilities of importers of new and used equipment and manufacturers (both being producers)

Producers should carry out their extended producer responsibility by providing for the financing of end-of-life management of their products, either collectively or individually. Producers should also be made responsible overall for the collection and treatment of the e-waste under the extended producer responsibility principle. In order to allow optimization and to maximize efficiency of the process implied by this obligation, producers should have the flexibility to design the collection system, choose the most appropriate recycling partners and select the most suitable financing mechanism for their own waste streams rather than let this be managed by a state led system.

Involvement and responsibilities of all stakeholders

Under any structure for the management of e-waste, it is important to map out all stakeholders and requirements necessary to ensure success. The involvement of all stakeholders that play a role in the product's movement, consumption and use in the marketplace, and a proper definition of all their respective requirements is essential for the success of the system. It is vital to understand that although the main responsibilities lie with authorities and producers,

all stakeholders including the consumers depicted in the figure below have responsibilities which must not be ignored



Free riding

Free riding poses a significant problem for the success of a national e-waste management system. In e-waste management systems, a free rider may be an obligated actor who either deliberately evades this or, due to unclear definitions of the obligated party within the regulation, is unaware of his/her duty for participation. It is important that authorities minimize the likelihood and occurrence of free riding both at the regulatory development stage as well as in the implementation and operational stage. Key to minimizing free riding is a clear and concise definition of the obligated parties as well as effective and continual enforcement of the rules.

StEP makes the following recommendations in order to minimize free riding:

- The definition of producer is critical and needs to be consistent.
- Due to the volumes of electronic equipment entering the country as legitimate equipment for re-use it is important that the definition also includes importers of used equipment and that this is made explicit in the regulation.
- StEP recommends that the producers be defined as “The local manufacturer or importer of record of new and used EEE to be placed on the Ghanaian market at first invoice by sale or by donation”.

The authorities should enforce mandatory registration of all EEE producers. Such registration details should be an important requirement for placing all new and used EEE on the Ghanaian market to ensure that all e-waste stakeholders participate in the EPR programme.

IV. System Design

StEP believes that any system that encourages the recovery and recycling of electrical and electronic equipment should be responsive to market forces and must support competition in transport logistics and recycling services. This can be achieved when multiple take-back systems are encouraged to operate in parallel, under common and agreed rules establishing a level playing field for all systems active, and ensuring minimum recycling standards are met and waste is collected all over the country. This will ensure cost effective environmentally responsible recovery and recycling.

A take-back system has three main functions: collection, processing (including final disposal) and system management. The financing scheme encompasses all the functions and enables the system to be executed. StEP agreed already in its White Paper “E-waste Take-Back System Design and Policy Approaches” (2009) that common goals for e-waste systems include:

- Motivate OEMs to improve product recyclability, reduce the use of toxic materials and integrate these concepts into product design;
- Prevent toxic materials from entering landfills or being incinerated in an environmentally unsound manner
- Recover scrap materials from the products, thereby avoiding the environmental burden associated with production virgin materials;
- Ensure that e-waste is processed in environmentally and socially responsible manner;
- Share responsibility among stakeholders;
- Motivate consumers to hand in equipment;
- Create an efficient and sustainable system.

V. Collection and Take-Back

The entire bill makes various provisions touching the highly important system-issue of e-waste collection. Nevertheless, it does not become clear how a future collection system should look like. Generally it has to be stressed that Ghana has a highly efficient e-waste collection system achieving collection rates as high as 95% (see forthcoming Secretariat of the Basel Convention -report “Where are WEEE in Africa”). The informal sector plays a crucial role in the collection system in terms of income for the poor and efficient collection but the e-waste collected by this system does not enter environmentally sound management. Taking into account the social dimension of the current collection system, it is highly recommended that the new Ghanaian e-waste bill ensures that the informal sector can sustain their work in activities with low risk for humans and the environment and gives opportunities to the actors to gradually upgrade their economic status to formalized operations.

The Agency shall encourage giving legal recognition to informal small-scale collectors in a way that they can continue to carry out e-waste collection but get clearly defined hand-over-points to structured and environmentally sound recycling. This can be achieved by facilitating simple registration mechanisms and the formation of associations or clusters for collection, storage and segregation. Small-scale collectors can register at designated assembly points/collection facilities or processing plants. Registration should become mandatory within a pre-defined transition period after entry into force of this bill.

The informal collection is driven by a system of buying and selling between collectors and consumers. Since the draft bill does not make provision for incentives as well as informal

collection schemes, the proposed collection centre may not get the required quantities of scrap to feed the proposed plant. From this perspective, it is also not clear whether municipal collection points as used in European countries are really needed. It is very likely that private households will not bring their e-waste to such points. Instead, small scale collectors will pick it up going from household to household. Collectors should be required to give collected e-waste to environmentally sound recycling facilities, which in turn would have to pay the collectors for their service. Generally, it should be considered to cover this collection payment via producer responsibility thus changing paragraph 30.1 in a way that importers, manufacturers, wholesalers, distributors and repairers would have the obligation to ensure financial sustainability of the current collection system rather than the provision of containers.

VI. Financing Mechanisms

StEP foresees several problems with the implementation of the Electronic Waste Levy and Electronic Waste Recycling Fund.

- The implementation of the Electronic Waste Levy and Electronic Waste Recycling Fund will mean that all operational responsibilities for e-waste management and recycling will become a government responsibility rather than a producer responsibility. StEP believes that the extended producer responsibility (EPR) principle and the polluter-pays principle should form the basis of any e-waste legislation (please refer in this paper to chapter ‘III. Responsibilities’ for more details).
- The implementation of the Electronic Waste Levy on importation or manufacture of all electronic equipment assumes that recycling always comes at a cost. Due to the high cost of raw materials there are currently many types of electronic equipment that can be handled through the entire recycling chain with lower or even zero costs. Charging a levy on these items would result in needlessly high cost for consumers of electronic equipment.

EPR systems have shown efficient results in other countries and through implementing EPR, Ghana can fully benefit from this knowledge. Furthermore, allowing producers to organize the collection and recycling of e-waste themselves will provide an incentive to look for the most eco-efficient recycling solution. This means that producers will push for state of the art recycling while at the same time pushing for costs down which will eventually benefit the customers and economy in Ghana.

VII. Social Dimensions

Article 19 requires generators, collectors, storers, transporters and disposers of hazardous waste and other waste to maintain adequate insurance cover. This paragraph is highly appreciated but may be critical for small scale collectors: As laid out in the study “Socio-economic assessment and feasibility study on sustainable e-waste management in Ghana”¹, waste and e-waste collection from households and businesses is to a large extent conducted by small scale collectors (often referred to as “scavengers”). Collection of e-waste gives income to thousands of persons in Ghana and in particular for unprivileged urban poor. Therefore, future management strategies should try to integrate these persons. Nevertheless, daily income

¹ See www.oeko.de/oekodoc/1057/2010-105-en.pdf

and financial resources are often marginal so that any additional expenditure will be very difficult to pay. It is therefore suggested to grant exemptions to individual collectors based on average daily income.

Currently the informal sector plays a crucial role in the WEEE management system in terms of income for the poor and efficient collection. The new Ghanaian e-waste bill should ensure that the informal sector can sustain their work in activities with low risk for humans and the environment and give opportunities to the actors to gradually upgrade their economic status to formalized operations.

VIII. **Transboundary Movements**

There should be a strong focus on prohibiting the import of items that are most likely to be non-repairable and therefore waste as these are the items of most serious concern. StEP understands that there are legitimate concerns with imports of non-functional equipment and with equipment for which there is no market. However, it is important not to crush the repair sector and therefore switch an environment problem for a social one (i.e. people losing their jobs) Here, critically the experience of inspection authorities has shown that there is an easily identifiable characteristic that can be used to determine the intention of the shipment of EEE and therefore say something about the status of the product inside:

1. As long as the equipment is properly packaged and well stored, it is almost always destined for re-use or refurbishing. Rarely does anybody go to the additional cost of properly packaging e-waste as the importer would lose in 3 ways. First, they would need to purchase the packaging materials, second, they have to pay someone to physically package the items and third, they can fit less kg of (W)EEE per container
2. In addition, it could be considered to ban the import of certain outdated equipment as these devices have high environmental impacts and are also far less efficient as newer equipment, thus being problematic for the Ghanaian electricity grid, amongst other issues.

StEP also suggests that there is a definition of ‘waste’ included to ensure these rules only apply to waste that has been generated and not to products being shipped for re-use.

PART II – Specific comments

- We recommend the bill contain definitions, among those being “hazardous waste” and “other wastes” which can be found in the Basel Convention; moreover, all definitions should be found in the beginning of the bill in order to maintain clarity when the definitions are used throughout the remainder of the bill.
- Article 1.1(c) states that „A person shall not except otherwise provided in this Act [...] sell, purchase or deal in hazardous waste.” This is critical with regard to e-waste, as some hazardous e-waste fractions need to be transported to environmentally sound facilities for appropriate treatment. An example is printed circuit boards: They contain both hazardous and valuable materials. Therefore, prohibiting the international shipments of e.g. printed circuit boards would severely hamper success in the field of sustainable e-waste management, especially with regard to materials recovery and proper treatment.
- Article 1.1(c) should be elaborated to ensure that domestic waste, especially that generated by the household, can be properly transported and treated. The amendment should include that Article 1.1(c) should only apply to imported, but not to domestically generated waste.
- The offence of bringing WEEE illegally into Ghana should be considered a criminal offence in line with the Basel Convention. This should be elaborated in Art 1.3 and 1.4.
- Liability for the unlawful action is provided in Art 1.3. There is a separate clause on liability specified in Art 13. There are also several references to liability throughout the document. One needs to ensure that there is a coherency between these clauses. Cross-references would help to do so.
- Reference to the Basel Convention and its Annexes including the Ban Amendment, which was ratified by Ghana, and the Bamako Convention is not present in the import provisions including the provision regarding a ban of export of wastes for disposal within the area south of the 60° South latitude to be included
- Article 2 refers to re-export which is not clearly defined. The Article 8 of the Basel Convention refers to re-import. This needs to be clarified.
- Article 2 refers to the fact that one of the conditions regarding “...hazardous wastes or other wastes to be imported...” specified in Article 2.1 must be met; it is imperative to specify that all conditions in Article 2.1 must be met or else a real potential loophole will be exploited.
- In Article 2 regarding the import of hazardous or other wastes, the language should be changed from ‘shall’ to ‘may’ since permission may not always be granted.
- Article 2.1(c) references should be made to which standard or to a regulation that clarifies which standards should be followed.
- Article 2.1(f) only applies after the authorization to import is granted by the competent authority; it seems inconsistent to grant the authorization after the final disposal of the hazardous and other wastes.

- Article 3.1(d) and other sub-paragraphs of the article: may be appropriate to refer to the exporter also or the generator; also it may be appropriate to add after “of the waste by requesting the relevant competent authorities of the states of import”.
- Article 3.1(g) may be more appropriate to refer to the “notifier”, which may be the exporter or the generator.
- One may wish to lay out the rules or make appropriate references to another legal instrument with regard to transport safety.
- It is suggested to move Art. 4 (1) and (2) under the title: exportation of hazardous and other wastes. Art 4 (1) first sentence should read: A person shall not export hazardous waste from this country. In the section on “Transporting Hazardous Waste” the language should be changed to “Exporting Hazardous Waste” since the ban on import may not be a ban on transit and, as a consequence transporting through a state that has a ban should not be banned, unless a ban in transport is also established by the concerned State.
- Article 5.2 could substitute “Exporter” with “exporter or generator”.
- Art. 6.8 should allow 60 days instead of six within receipt of a notice and subsequent informing the Competent Authority or State of the decision.
- Liability is not defined as a criminal offence, but only applicable to a civil suit in case of illegal traffic. In general illegal traffic and its punishment are not explicitly mentioned in the bill.
- It may be beneficial to specify that details on collaboration between the agencies in Article 14 and the Agency (Basel Competent Authority) in the area of transboundary movements of hazardous wastes and other waste will be developed in a separate agreement (e. g. inter-ministerial Memorandum of Understanding) and that the Agency is the Basel Competent Authority.
- Article 17.2 states that "The Agency shall ensure that hazardous wastes are not mixed with non-hazardous waste unless the generator, collector, storer, transporter or disposer proves that the mixing is more environmentally sound". This Article is problematic since it allows the dilution of hazardous waste with non-hazardous waste which can lead to less problematic waste mixtures but also to a higher quantity of contaminated waste. Furthermore, it is unusual that the Agency and not the generator of the waste are made responsible. Therefore, it is recommended to only state "The generator, collector, storer, transporter or disposer shall ensure that hazardous wastes are not mixed or diluted with non-hazardous wastes".
- Article 17.3 states that “The Agency shall not allow hazardous or other wastes to be transported from the site of generation unless the packaging and containers for their transport are labelled accordingly in a clearly visible form and a movement document shall accompany the transportation.” With regards to e-waste this is critical as this would mean that private households aiming to transport and dispose of e-products would have to comply with these obligations. Therefore, it is recommended to add an exemption e.g. for a minimum weight of hazardous waste generated in private households and transported for proper disposal by household members. Similar issues arise for Article 23.

- Article 17.3 states that "The Agency shall not allow hazardous or other wastes to be transported from the site of generation unless the packaging and containers for their transport are labeled accordingly in a clearly visible form and a movement document shall accompany the transportation." The related movement document form should also be available in an annex.
- The below points refer to the definitions in Article 27:
 - Currently the list of "interpretations" in Article 27 does not correspond to the definitions used in the main text of the Bill. There is also no differentiation from the point of view of the intent for which hazardous waste is imported (re-use, recycling, disposal, etc.) (Annex IV of the Basel Convention).
 - The definitions could be placed after the aim of the bill; this facilitates the reading of the bill, where the different terms are mentioned.
 - The definition of "approved facility" and "facility" can create some confusion; it is therefore suggested to diversify or clarify these definitions.
 - Definition of "hazardous wastes": it contains the definition of waste and of hazardous wastes. It is advised to split the two definitions. Also, mention to national law disappeared from the definition of waste, reference to national law or any national process to add hazardous wastes to the Basel list may be useful.
 - Definition of "illegal traffic" it is incomplete. If reference to Article 9 of the Basel Convention is not included in the legislation, the definition included in the Basel Convention could be described in the legislation.
 - Consider including the missing definitions mentioned in Article 2 of the Basel Convention such as "disposal"
 - A "transboundary movement" is defined only as export. This may be difficult to implement when parts required for recycling or recovery travel transboundary according to the convention.
 - A "person" is defined differently in the legislation than in the text of the Basel Convention.
- Article 28.3 is not logical if the registration only applies to manufacturers/ importers. Do the public services mentioned import equipment directly, or don't they rather do it through suppliers? In addition, exemption of government departments does not give a good example for implementation. Should re-visit.
- Article 28.5 is confusing as it uses the word "register", which could thus be understood as if the retailers would also have to register within the system for the fee. We recommend this as an obligation to inform register as an producer with the authorities and indicate the type of EEE imported/manufactured.
- Articles 28.4 and 28.5 do not set out clearly what 'particulars' are required to be submitted to the authorities; these should be proportionate.
- Article 42.1 states that "there shall be an electronic waste recycling plant which shall be managed by the Agency". It is questionable whether a state run facility will be in the best

position to manage the recycling of e-waste. Although it is clear that government has an important role in e-waste management, private businesses are usually in a better position to run and optimize recycling businesses and processes As they are much more flexible to react to market changes. In turn it is highly advised that the government lays out the principles (e.g. environmental and health and safety requirements) of privately managed recycling companies.

- Article 42 provides that the Agency will be responsible for managing the recycling plant and simultaneously there are provisions on setting up these plants by private persons leading to inconsistencies on responsibilities for recycling. Moreover, it should be clarified what is meant by disposal assembly points, designated collection facility and recycling plants and what the links are between them.
- In Article 43.2, it is recommended to add a fourth subsection (d) that states "that WEEE is processed, recycled and finally disposed of according to best-applicable-technologies"
- Articles 45 and 46 only refer to the collection of WEEE. They should however refer to the collection, recycling and the final disposal of WEEE. In Article 46 at least some basic requirements, which still can be more elaborated in additional guidelines, should be listed. E.g. *the Swiss Ordinance on the Return, the Taking Back and the Disposal of Electrical and Electronic Appliances (ORDEA)*²
- Article 45 lacks the specification of required standards for operations for the collection facilities? Same applies to Article 31.1(b). Obligations for collection, recycling and disposal need to be clearly spelled out, harmonized and streamlined. E. g. currently the requirements in relation to disposal are placed in Articles 31 and 49. Article 48 on obligation for taking back refers to legal entities only but should also mention individuals. There also needs to be specification to where the used EEE or e-waste need to be taken back. We recommend distinguishing between "collection" and "take back systems".
- Article 49.2 states that a person who desires to dispose of WEEE is responsible for the disposal in an environmentally sound manner in accordance with state-of-the-art technology. This is critical since it is usually not the person who disposes of WEEE but the body who is obliged to take back WEEE that is responsible for the environmentally sound disposal.
- Article 50 should clarify who is responsible for the permit...
- Manufacturers should be able to take over the responsibility from importers should they wish to.
- Key issues such as "functionality" and "intent" in relation to EEE are not specified in the Bill.
- The Bill would benefit from including a clause on the procurement policy for EEE for users of EEE in the public sector.

² See the Swiss Ordinance on the Return, the Taking Back and the Disposal of Electrical and Electronic Appliances (ORDEA) - <http://www.bafu.admin.ch/abfall/01472/01478/index.html?lang=en>

Several tools have been developed to assist Parties develop or update their legislation. These include

- the Checklist for the Legislator developed by the BC Implementation and Compliance Committee and that could be used by Ghana to assess whether all relevant BC provisions are reflected in its (draft) national legislation (it can be accessed at: <http://www.basel.int/Portals/4/Basel%20Convention/docs/legalmatters/natleg/chkfst210706%20.doc>) (attached)
- the Model Legislation developed by the Legal Working Group on the basis of existing national legislation and institutional arrangements in various countries. It is designed to assist Parties in developing and/or up-dating their national legislation and institutional arrangements to ensure the environmentally sound management of hazardous wastes and their disposal and to facilitate and ensure the compliance of Contracting Parties with the provisions of the Convention ((available at: <http://www.basel.int/Portals/4/Basel%20Convention/docs/pub/modlegis.pdf>) (attached)