EXTRACT of ISSUE PAPER

Art.6.2 pilots versus PoA

or National Policy Traditions and PoA Designs

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Abstract:

Art.6.2 pilots and PoAs have multiplied in the last months. Agencies and investors proposing them are tempted to anticipate future changes in the Paris Agreement. For the emission reductions targets, PoAs and Art.6.2 pilots are alternatives and some agencies and investors consider PoAs and Art.6.2 as competing instruments, others as complementary.

This paper provides a common frame of interpretation for Art.6.2 and PoAs. This frame is applicable to all mitigation efforts. For comparisons of current Art.6.2 and PoAs, this frame provides a basis for predicting the evolving differences and commonalities of PoAs and Art.6.2.

PoAs are categorised by PoA investors and their project choices, countries and CPA implementors. Inferring investor strategies from PoA details can not distinguish delivery risk judgment (type) from regulatory risk (country) judgements. Their choices of CDM methodologies are the best indicator.

Art.6.2 pilots are clustered for the orientation of the agency running them. This categorization of Art.6.2 is based on type, location and scope of the ambition in terms of emissions. The categorization is reliable also because of the marked differences among the first 50 NAMAs.

The PoA potential in each country is classified as *Spillover* potential, *Ill-adaptation* potential, *Fig-leafs* potential and *Rent-seeking* potential. These PoA potential categories are to a lesser degree unintended outcomes of Dutch and German policy funding. SouthPole's PoA strategy is most suited for countries with *Ill-adaptation* NAMAs, whereas Mabanaft's PoA strategy should be most successful in *Spillover* countries.

The dichotomy between PoA and Art.6.2 is exaggerated. In many countries either one or the other is feasible. The strength of a Art.6.2 type is a weakness in another country. The translation of policy from the global to the national level is once again decisive.



1. Systems' Assumptions in Climate Policy Views

Mitigation efforts always imply assumptions about the systems' properties of the particular emissions. Two separate sets of systems' assumptions are independent, those about the material world and those about the institutional or political world.

Material systems' parameters:

Material flows occur on different scales, the horizontal axis. Assumed couplings between industrial material flows and ecosystems' flows often imply scales. The vertical axis reflects whether these are physical linkages or lifeworld (cultural) decisions. For example Kuznet curves imply that material flows follow from income levels, whereas 'Sustainable Production and Consumption' assumes the opposite causality (lower on vertical axis).



Similarly, the institutional world contains systems' properties along gradual scales of level of aggregation and type of institutional matter.



When material decisions are within an individual's influence, then closed institutions follow, whereas if material decisions are only possible for sectors or economies then open inclusive deliberations are needed. When systems' characteristics decide material flows these should be judged on efficiency whereas a normative institution is required when material flows are lifeworld (cultural) decisions. While these axes on the institutional and the material level are similar they are also absolutely independent. Nonetheless, they are taken as bolted together, maybe for ideological, religious, cognitive, or even somatic habits.



In climate policy debates, parties in negotiations struggle with many implicit and explicit systems' properties assumptions. Countries have well established and entrenched traditions of environmental policy making, even more than in other policy domains.

The graphic below is an illustration of the systems' property assumptions in policy traditions. There is a fit between the material and the institutional system' properties. Germany's Feed-in tariffs include some market price distortions but have more impact than the UK's Renewables Obligation designed to operate via market prices. This fit allows additional insights on assumptions behind policy choices although both the material and the institutional systems' properties are uncertain (but if they wouldn't be uncertain, governments would not hold on to them so much). When for example, the World Bank designs a climate loan for a country, choices in this design can be described well with the systems' properties assumed. Or when a PoA investor decides whether to invest in creating a new CDM methodology, there are choices of parameters and management that privilege some systems' properties.



From centre outward the prominent environmental goals and the means to attain them are shown (in black referring to the material level). Finally on the diagonal ends (red), the overriding policy concerns frequently primordial in a country. These follow not only from the political tradition but equally from the acquired capacities to articulate and implement the respective types of policies. The German policy community is productive in imposing control of commons, whereas the British policy community is more skilled with market instruments, and so on. The Dutch prolong what they learned in the *Rijkswaterstaat* and the Californian Air Resources Board designs its own ETS.

It remains a question whether these system's properties are suitable to distinguish PoAs and NAMAs. Next, the PoA investor strategies are described and then the NAMAs proposed so far. It turns out that this typology applies well to both and is then used to suggest how PoAs and NAMAs relate to each other in each country.



2. PoA Investor Typology

Commercial investors created an explosion of PoA CDM in the last six months. Over 300 PoAs are in the pipeline, covering many countries and mitigation technologies. These investors' strategies are well evident in their choices of technologies, countries, CPA operators and eligibility criteria.

By volume, Mabanaft, SouthPole, JP Morgan	PoA investor strategies anticipate future policy trends			
and Standard Bank are the most important. Mabanaft is a fossil fuel commodity trader, using a large supply of CO ₂ as an integral part of its trading strategy.	Bulk strategy: regional balance, low FiT, low issuance risks Mabanaft wind, SHP II.C I.C	Types are globally rewarded, innovate mitigation, genuine PoA elements SouthPole umbrella renewable, compost_steel		
The CER costs are less				
and reliability. Whereas SouthPole is	Deutsche Bank	Standard Bank SWH, III.AR, II.J PoA non-CO _o benefits		
the only investor in PoA as an instrument per se, choosing difficult countries	geothermal	JP Morgan stoves, SWH Vitol stoves without PoA Gunvor solar cookers without PoA		
and types, and when many of their PoAs won't go to scale, those who do bring market profitability.	negotiation outcomes	sustainability: suppressed demand, NGO channels, value of carbon on household type		

Investors betting on the importance of control of commons, i.e. a strong global CO_2 regime and the importance of normative criteria, are investing in those PoAs with the highest poverty impact. Vitol and JP Morgan have set up large scale PoAs for household stoves because this is the highest quality carbon. They bet on the carbon market to further segment into price levels reflecting social benefits. The high delivery risks of stove CER are worth being taken.

It is difficult to distinguish the investor's delivery risk judgment (type) from his regulatory risk (country) judgement. Most investors also follow the demand side. Their choices of the particular methodologies (II.C or II.J, II.C or III.AR, II.C or III.X, ...) are the best indicators. The differences in types, volume and monitoring among these six major PoA investors are coherent and show that they focus predominantly the institutional level, distinguishing efficiency concerns from normative concerns. PoA investors seem to make the right interpretations and articulate the right kind of strategies, because indeed the future of the CDM is a political process involving actors at different levels of governments whose interactions are in a large part determined by their qualitative differences. To succeed with PoAs, the investors anticipate institutional factors to be decisive.

3. NAMA Typology

Independently of the PoA preparations and starting slightly earlier, Non-Annex I country governments have developed the first NAMAs. Many policy voices assume that NAMAs are superior to PoAs. However, it is likely that this dichotomy has been exaggerated and NAMAs and PoAs are only alternatives in certain countries and in more countries either one or the other is actually feasible. There are already big regional differences, as can be seen in the following table.



Table:	PoA and	NAMA	Numbers
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By Jan 2012	РоА	NAMA
Asia	110	7
MENA	5	13
Latin America	33	17
Africa	53	6

Commercial investors have preferred Asian countries because of the volume potential. Asian governments are reluctant to propose NAMAs. In MENA, it is the opposite as commercial investors avoid the regulatory risks from MENA governments and on the other hand MENA governments are keen on attracting funding with NAMAs. There are more PoAs in Africa than in Latin America because of the EU's restriction of the EU-ETS to LDCs. This might also play a role in the higher NAMA activity by Latin American governments.

The choice of NAMA sector and approach is an elaborate set of uncertain policy choices. Contrary to PoA development, the NAMAs published are not yet detailed enough to predict their outcome and their funding is uncertain. Nonetheless national differences appear and their material and institutional systems' properties are salient. One element of the NAMA choices is the agency chosen, a second the prominence of the emissions, and equally important the links between national priorities and global priorities. These elements are often related, powerful Ministries create NAMAs that reflect important sectors, whereas less influential Ministries chose less prominent economic sectors. In the following graphic, the upper-left NAMAs are in the major economic sectors, thereby increasing the coverage of the carbon market. Lesser sectors would not create the same gains from specific cost differences. Upper-right, the NAMAs put more focus on what is locally relevant, in particular public services.

	NAMA choices select natio	NAMA choices select national link to global climate efforts			
Private goods		Egalitarian groups			
	connect sectors, Coasian ambition	decentralised grids, stakeholder consultations			
The prominence of the sector chosen is used to classify the country as pursuing Coasian	Mexico: sustain. housing, low-income HH	Jordan: municipal services, water sector			
	Costa Rica: coffee farming	Thailand: wastewater system			
	Chile: mining, geoth, forests, modal shifts	Tunisia: wastewater, SWM, Plan solaire			
ambitions, upper-left.	<				
For lower-left, the lesser weight of the sector is the criterion. This classification does	South Africa: electric car, concentrated solar power, SARI renewable barriers Indonesia: peatland management	Brazil: metro system Belo Horizonte China: transportation demand management Morocco: DSM in industry, SWH-CFL-buildings			
not use emissions or the	Ethiopia: rail transport, stoves	Uganda: Feed-in-Tariff			
technology, instead the link between national and global concerns is used as key criterion.	Egypt : Cairo transport, SOE, lights reduce coupling, delink	Demand-side management, Feed-in tariffs Hierarchical control of commons			

In the next graphic below, the links are characterised, grouping countries whose NAMA are similar. The lower left and right cases are both unconnected to national priorities and NAMAs are not related of economic policy issues. Lower left implies NAMAs that are influenced by issues relevant globally esp. electric cars, or peatland. The latter is of low relevance within Indonesia but a global concern. The Indonesian president used it to underline the country's importance at the G-20 meeting in 2010. Similarly, the Ethiopian and South African governments created NAMAs for foreign policy reasons, a particular middlepowership using the UNFCCC to confront perceived enemies. Mexico, Costa Rica and Chile have chosen NAMAs involving key sectors. Their choices increase their profile in climate



policy and the goal to keep these sectors competitive is also relevant. Jordan, Thailand and Tunisia have selected nationally important sectors but not for their economic role. These NAMAs could also be labelled socially "inclusive" by benefiting the whole population. These NAMAs also achieve higher sustainability influence. Finally Brazil, China, Algeria, Egypt, Morocco and Uganda's NAMAs are marked by an eagerness to be engaged, to participate in mitigation

	Orientation of NAM	agencies		
Private goods Egalitarian groups				
connect sectors, Coasian ambition		decentralised grids, stakeholder consultations		
Mexico: Costa Rica: Chile:	strong national champion Ministries focusing economic linkages and benefits	Jordan:important national policyThailand:entity with strong linksTunisia:and strong foreign advisor		
benefits key economic sectors		national benefits for national policy problems		
funds create new activity		reluctant participation with existing scheme		
South Africa: Indonesia: Ethiopia: Egypt:	follow funding potential and local significance from global perspective, low national priority	Brazil:no national input and policyChina:entity, foreign funder andAlgeria:new scheme -Morocco:choice is create one only asUganda:but not a current one		
reduce coupling, delink		Demand-s	ide management, Feed-in tariffs	
		,	Hierarchical control of commons	

instruments but without exposing itself nationally. The NAMA actions do not involve strong stakeholders. The Metro system of Belo Horizonte is a long-term undertaking with little impact of national significance. Brazil's sugarcane alcohol fuel scheme would have been a transport sector NAMA of higher importance, nationally and globally, but it is politically difficult. The preferred focus is neither globally of high priority nor nationally. Brazil and China have chosen singular issues with long time horizons and MRV difficulties, probably not out of policy ambition but for the convenience of decision-making and to demonstrate a minimal commitment to NAMAs. Similarly easy NAMA choices have been made in Egypt, Morocco and Uganda.

4. **Relations between NAMA and PoA**

The orientation of the national NAMA entity is a determining factor for the possible PoA. NAMAs might leave activity fields or specific roles for PoA, depending on the contribution by the private sector in climate policy judged adequate.

NAMA choices versus PoA preferences The graphic to the right qualifies the NAMA choices and suggests Private goods Egalitarian groups implications for PoAs. connect sectors, Coasian ambition decentralised grids, stakeholder consultations Mexico has defined in detail what NAMAs fully used so NAMAs only superficially translated PoAs are for within NAMAs, so in Mexico: Jordan: by squeezing them into national politics PoAs can be = PoAs some influence by showing this country the NAMA owner seeks Costa Rica: complementary or Tunisia: higher potential to foster the PoA role. Actually precede to new sectors Chile: many "spillovers from Thailand: NAMAs and PoAs equally suited the NAMA owner is also the PoA's PoAs" are realistic CME, which might not be NAMAs politically preferential but effective. But clearly, creating Brazil: South Africa: NAMAs compete with NAMA structure as such is not received China[.] a PoA in Mexico implies the Ethiopia: PoAs and translated into national policy Algeria: Egypt: probability of it being integrated Morocco: not preferred by PoA investors and govt NAMAs and PoAs are Indonesia: Uganda: reject their influence but local into a NAMA, thus "spillovers" both slow and can work commercial stakes drive AWMS PoA are possible. jointly = facilitate commercial PoA and Jordan, Thailand and Tunisia are reduce coupling, delink select those govt will one day take over addressing important policy **Hierarchical control** of commons concerns they have been pursuing 6

for a long time and reproduce measures that have not worked in the past, instead of designing the NAMA with lessons learned. Jordan's water infrastructure has been stuck in genuine Jordanian policy problems. Public water supply is a central arena. Likewise, the Tunisian ANME continues with its NAMA where it has failed to put aid funds to use. ANME's strength, biases and weaknesses can reappear. In Jordan or Tunisia, PoAs will reveal resource conflicts that PoAs are not designed for. Rather than spillovers from PoAs to NAMAs (as in Mexico), there is a danger of PoAs being obstructed. Their potential influence is limited. The country context is considerably marked by the ill-adaptation of NAMAs. Thailand is likely to become a special case if the government decides to create a NAMA as suggested by advisor SouthPole (not yet certain).

South Africa, Indonesia and Ethiopia chose NAMAs with weak links to national policy concerns. Their content is globally relevant and they seem good candidates for supported NAMAs but are likely to remain isolated in the national context. Concentrated solar power and electric cars are somewhat ahead of the current economic problems of South Africa. Similarly it is not of concern to the Ethiopian economy to build railways. These countries might also have chosen unconnected NAMAs because the main economic policy initiatives should not be exposed to foreign influence. The NAMA choices in South Africa, Indonesia and Ethiopia are influenced by Rent-seeking to attract NAMA funding and create locally useful resources.

Spillovers from PoAs	Ill-adaptation
Building on a market friendly orientation of climate policy in general, PoAs can be innovative and certain to exert influence through their impact. PoAs are a good experimentation channel to affect the national efforts.	NAMA choices are not coherent with national agendas. Governance problems are likely because of the prominence of the issues. PoAs can exert influence but the barriers are high. PoAs' influence is limited from the start and designing them uncertain.
Rent-seeking	Fig-leafs

Table:	NAMA Choices and their Resulting PoA Opportunities
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This categorization of NAMAs is based on the type but also the location and scope of the ambition in terms of emissions. The categorization is quite reliable because of the marked differences. The role the NAMA funding uncertainty is difficult to discern. Governments might judge the Green Climate Fund as unpredictable. Nonetheless the PoA potential is specific for each NAMA choice. Governments determine the checks on double counting and have many means to influence PoA viability. The decisions for NAMAs suggest how PoAs fit into government policy.

The NAMA categories reflect the institutional level of systems' properties well since Mexico, Costa Rica and Chile are politically inclined to use market instruments and to address climate change with the classic 'internalising externalities' ambition. Tunisia, Morocco and Thailand are possibly pursuing these NAMAs because they create better public services for all. South Africa, Indonesia and Ethiopia avoid linking the important sectors of their economies to climate policies. Only the Fig-leaf NAMA countries, Brazil, China, Egypt, Morocco and Uganda do not fit the "Hierarchical control of commons" in a similar way. Brazil certainly has a strong tradition of using the natural resource endowments for the benefit of all, so the Commons notion has a particular character. China's NAMA choice is very similar to Brazil's NAMA choice but probably for other reasons.

It is suggested above (end of chapter 2), that PoA investors are making the right interpretations and articulate the right kind of strategies, because Mabanaft, SouthPole and JP Morgan's PoAs are distinct on the institutional level of systems' properties. To succeed with PoAs, the investors anticipate institutional factors to be decisive. Certainly the PoA investors pay little attention to NAMA preparations. Nonetheless, it is revealing to see if Mabanaft's PoA would fit the NAMA choices in Mexico, Costa Rica and Chile, if SouthPole's PoA fit the III-adapation NAMAs in Tunisia, Jordan and Thailand, and if JP Morgan's PoA work well in the Fig-leaf NAMA countries.

Spillovers	III-adaptation		
Bulk carbon strategies in PoAs are clearly well suited for these countries.	SouthPole's PoA are particularly innovative and can be influential in ill-adapted NAMAs. But PoAs (CMEs) will not foster adaptation.		
Rent-seeking	Fig-leafs		
PoAs are possible in sectors that NAMAs avoid. Deutsche Bank PoA are not tolerated in NAMA sectors because they reduce their rents.	JP Morgan or Vitol's PoA can evolve freely, as do nationally owned PoAs like the commercially competing Animal Waste Management PoAs of meat corporations in Brazil.		

Table: PoAs Strategies' Feasibility in the NAMA Choices

A remaining open question is the influence of NAMA advisors. Only five advisors are active in the majority of NAMAs. Perspectives, Ecofys, ECN, GIZ and ERC play a role, not the least by their respective strength and weaknesses. Certainly these advisors have grown during years of working for one or two funders and the German and Dutch governments are certainly the most influential.

This graph indicates		NAMA	advisors	
the advisors that contributed to each	Private goods		•	Egalitarian groups
NAMA. Germany	connect sect	ors, Coasian ambition	decentrali	sed grids, stakeholder consultations
based advisors				
dominate in the	Mexico:	Ecofys, Perspectives	Jordan:	World Bank
reluctant participation	Costa Rica:	CO2.cr	Thailand:	-
group, lower-right.	Chile:	ERC/SSN	Tunisia:	GIZ / Ecofys
Possibly the German	hanafi	to kov according acctore	notional how	ofite for notional policy problems
Ministry (BMU)	denem	is key economic sectors	national ber	tents for national policy problems
intention to spend	funds	create new activity	reluctant pa	rticipation with existing scheme
the income from	South Africa:	ERC	Brazil:	ECN
the EU-ETS auctions	Indonesia: Ethiopia	UK - IRL	Algeria	GIZ Perspectives
nlavs a role	Peru/Vietnam:	NEFCO	Morocco	Perspectives
The same advisors are	Laos:	GEC(J)	Lebanon:	Perspectives
	Barbados:	IDB	Uganda:	SouthPole
also active in the national	reduce coup	ling, delink	Demand-s	side management, Feed-in tariffs
policy group, upper-right.				Hierarchical control
Perspectives' work in		1	k i i i i i i i i i i i i i i i i i i i	of commons
Mexico and SouthPole's				
work in Thailand will be most i	nfluential.			



Final Thought

This conceptual frame of systems' properties on the material and institutional levels applies well to PoA strategies and NAMA choices. A plausible reason for this is the climate policy arena itself. Ministries defining NAMAs are positioning themselves in a global policy arena. Emerging PoA strategies and emerging NAMA choices should increase the differences between PoAs and NAMAs in each of the four country groups.

PoA investor choices are constrained by their business models and only dedicated companies such as SouthPole or Ecosecurities can define their commercial strategies at liberty. NAMA choices by governments are more flexible than PoA investors although environmental policy carries national historic legacy. RWE and E.ON allocate budgets to carbon sourcing but the powerplants they own remain exogenous to this allocation. Whereas governments can discriminate between sectors and technologies more easily than corporations.

